FUTURE CONDITIONS WITH NEW DEVELOPMENT AT THE SITE

The Study Team evaluated future conditions with the site for three scenarios. The first step in the assessment of future conditions was to calculate the number of trips generated by each of the development options, Options 1, 2 and 3, described in Table 1. The Study Team also calculated trip generation for a fourth site development scenario that included residential, retail and office development. After calculating the number of trips generated by each development scenario (options 1, 2 and 3), the Study Team used existing trip distribution patterns to develop traffic assignments at each of the critical intersections in the study area. The traffic assignment task involves estimating how many of the expected new site trips are added to the traffic at the critical intersections in the study area. For these three scenarios, the site traffic was added to the sum of existing traffic, growth in background traffic and traffic generated by other area development to determine total future traffic volumes.

SITE TRAFFIC TRIP GENERATION

The trip generation for the study scenarios was calculated using trip generation rates from the Institute of Transportation Engineers Trip Generation Manual, 6th Edition. The transit usage percentages were calculated based on information provided in Development Related Ridership Survey, published by the Washington Metropolitan Area Transit Authority. For each of the four options, the additional new trips were estimated by subtracting the trips generated by existing land uses (that are to be eliminated) from the total number of trips generated by the proposed new land uses. Appendix E presents detailed information on the trip generation calculations for the four options.

All of the options include the existing library at the site. Option 1 includes residential development only. Option 2 encompasses a combination of residential and office development. Option 3 includes a mix of residential and retail uses. Option 4 has residential, office and retail land uses.

As Table 6 indicates, the increase in traffic due to the implementation of Option 1 is negligible. In fact, the implementation of Option 1 is not expected to generate an increase in traffic at the site during the AM and PM peak hours and the daily trips are expected to increase by only 130.

The Study Team estimates that the implementation of Option 2 will increase daily traffic by approximately 1,000 trips. Because of the office development component, the AM peak hour trip generation for the site is greater for Option 2 than for the other three options included in the analysis. However, during the PM peak hour, Option 2 is expected to generate one-half of the estimated number of Option 3 or Option 4.

The Study Team estimates that Option 3 will generate twice the number of Option 2 daily trips. Because of the lack of office development, the AM peak hour trips for Option 3 are less than the AM peak hour trips for Option 2.

Table 6
Net Trip Generation for the Different Land Use Scenarios

Option	Proposed Future Site Development	AM Peak Hour Trips			PM Peak Hour Trips			Daily Trips (2-Way)
		In	Out	Total	In	Out	Total	
1	Planned Unit Development in Zoning District R-5-B 166 Residential Units 19,060 Sq. Ft. Library	-24	24	0	7	-10	-3	130
2	Matter of Right in Zoning District C-R 185 Residential Units 19,060 Sq. Ft. Library 165,575 Sq. Ft. Office	77	42	119	29	82	111	980
3	Planned Unit Development with Overlay in Zoning District R-5-E 369 Residential Units 19,060 Sq. Ft. Library 73,258 Sq. Ft. Retail	-7	77	70	129	72	201	1,960
4	Matter of Right in Zoning District C-R with Office and Retail 185 Residential Units 19,060 Sq. Ft. Library 135,575 Sq. Ft. Retail 30,000 Sq. Ft. Office	47	47	94	113	120	232	1,960

Note: The tables Site Trip Generation – Option 1, Site Trip Generation Option 2, Site Trip Generation Option 3 and Site Trip Generation Option 4 included in Appendix G present detailed information on the trip generation calculations for the four options.

The trip generation estimation indicates that Options 3, which has retail components, and Option 4, which has retail and office components, have the largest daily and PM peak hour trip generation. As shown in Table 6, these options are expected to generate over 200 PM peak hour trips and nearly 2,000 daily trips. The addition of a large number of trips during the PM peak hour is critical because delays and traffic congestion in the study area are more severe during the PM peak hour than during the AM peak hour.

SITE TRIP DISTRIBUTIONS

The Study Team used existing traffic count information and trip distribution information documented in other traffic studies in the area[1] to develop trip distributions for the forecast site trips. The Study Team developed one set of distributions for residential trips and one set of distributions for commercial trips. The same residential and commercial distributions were used for all three of the development options. The residential and commercial distributions used to assign the site trips for this study are summarized in figures 16 and 17. More details on the distributions are presented in Appendix F.

SITE TRIP ASSIGNMENTS

The Study Team assigned the site trips generated by each of the development options to the study area network using the trip distributions shown in Figures 16 and 17. The estimated future year trip assignments for options 1, 2 and 3 are summarized in Figures 18, 19 and 20.

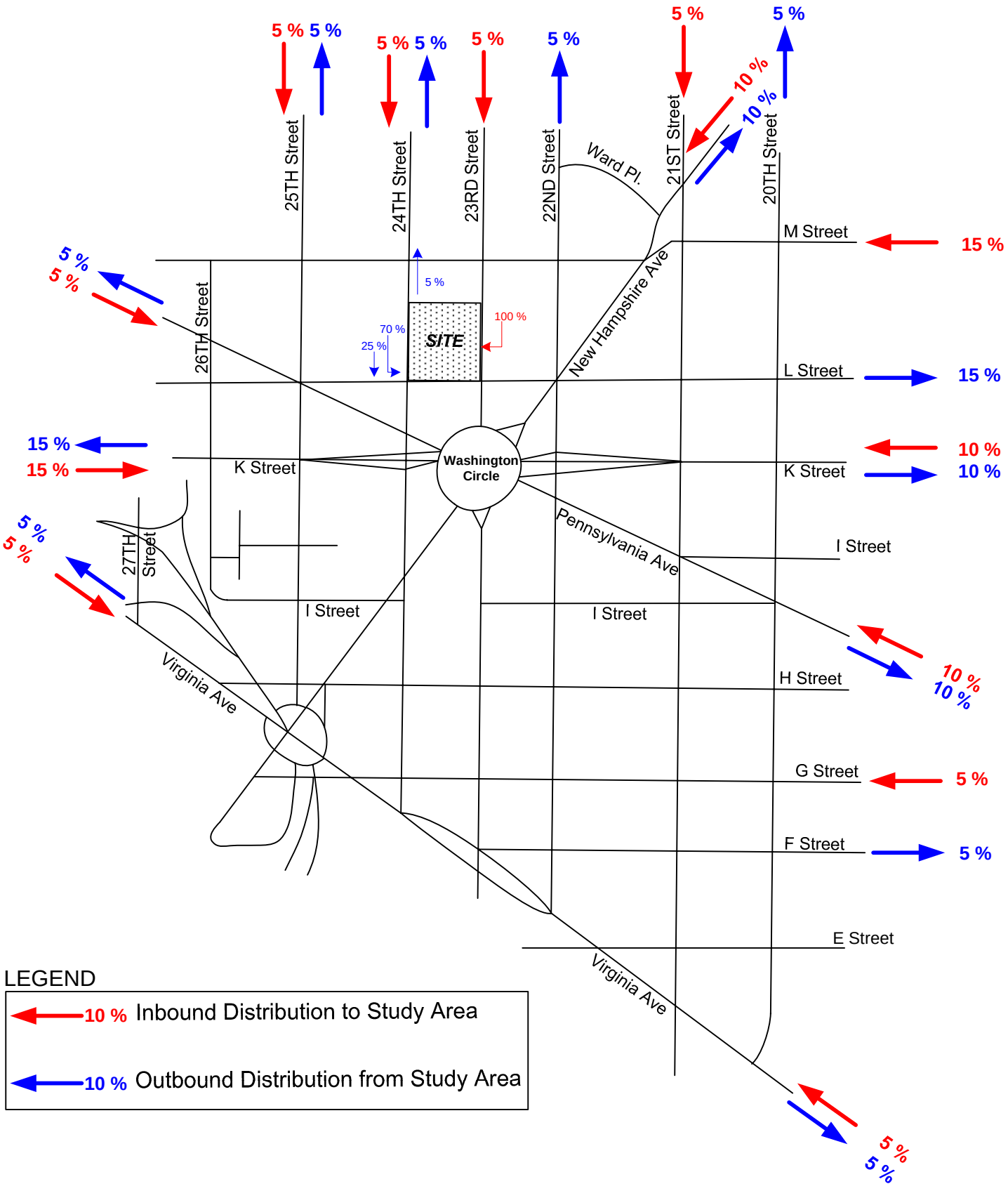
The addition of traffic volumes at the critical intersections increases with proximity to the rezoning site. Under Option 1, the maximum increase in approach volumes is 27 trips on southbound 24th Street at L Street during the AM peak hour. Under Option 2, the traffic increases in the vicinity of the rezoning are much greater than they are under Option 1, but they are relatively low compared to the overall traffic traversing the critical intersections during the peak hours. For Option 2, the maximum increase due to site traffic occurs on the 23rd Street southbound approach to L Street. Traffic on this approach is expected to increase by 76 trips with the implementation of Option 2 during the PM peak hour. For Option 3, the maximum increase at an approach occurs on the eastbound approach of L Street at 23rd Street. Traffic on this approach is expected to increase by 75 vehicles with the implementation of Option 3 during the PM peak hour.

TOTAL TRIP ASSIGNMENTS WITH SITE DEVELOPMENT

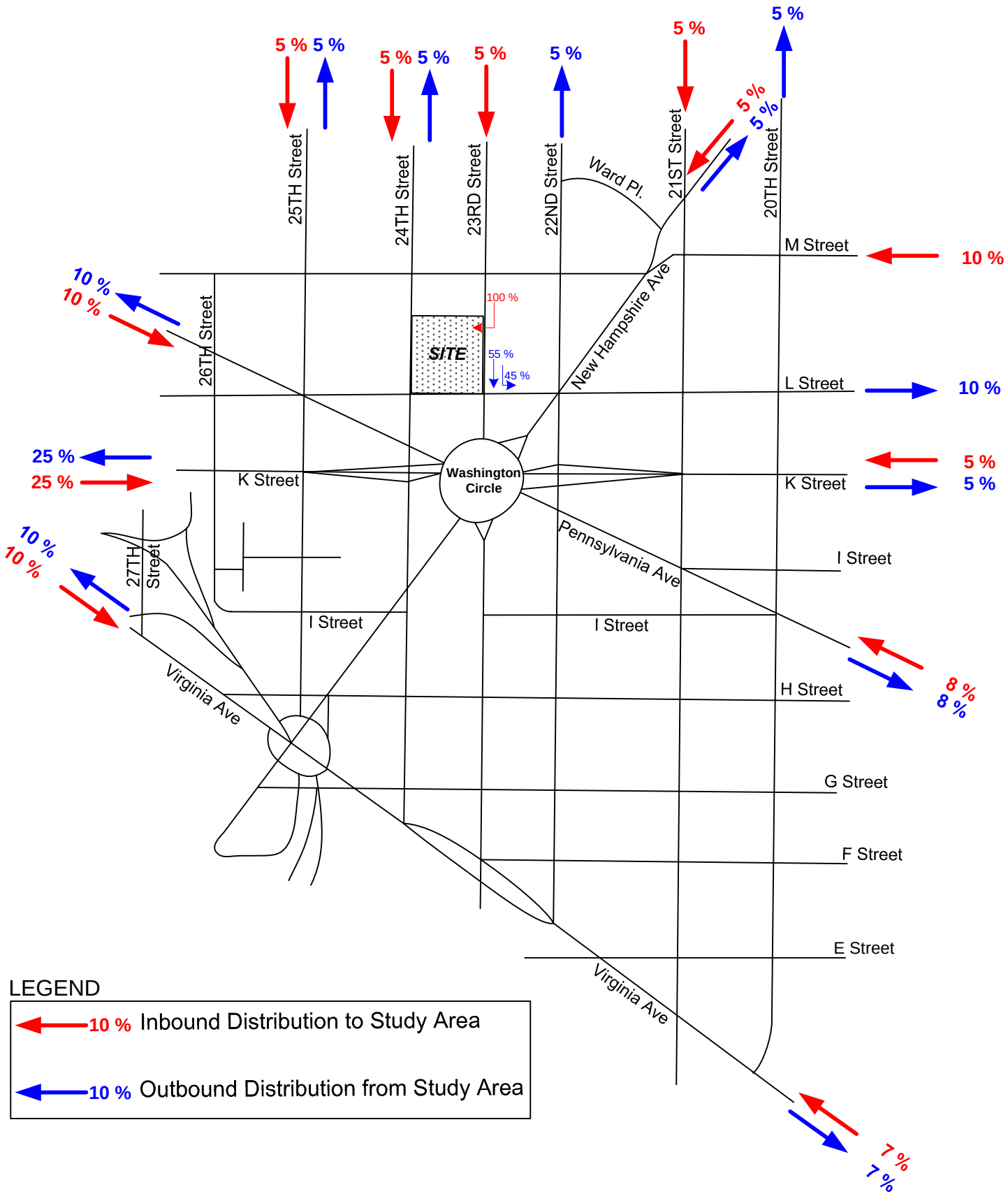
In order to forecast the total number of vehicular trips that are expected to traverse the study area intersection during the forecast year, 2007, the Study Team added the following layers of traffic volumes for each of the development options:

1. Existing Traffic
2. Growth in Background Traffic
3. Trips Generated by Other Area Development
4. Site Traffic

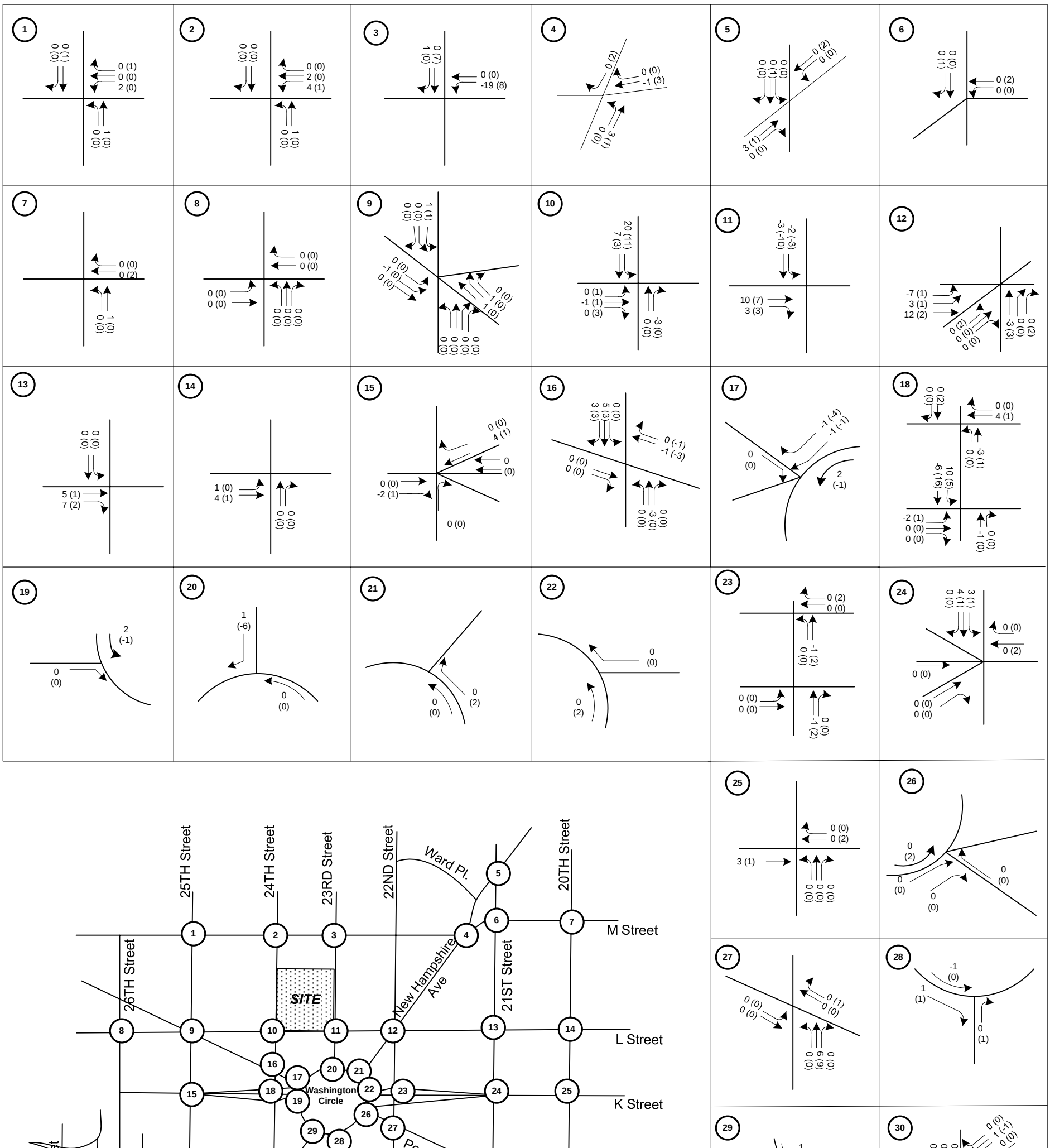
[1] Traffic Impact Analysis – International Monetary Fund Headquarters 2 Building, Rezoning and Planned Unit Development Application, District of Columbia Zoning Commission, Washington D.C., prepared by O.R. George & Associates;, May 11, 2001; The George Washington University Replacement Hospital Transportation Impact Analysis, prepared by Gorove/Slade Associates, Inc., November 4, 1998; 2200 M Street N.W. A Mixed Use Development Application to the District of Columbia Zoning Commission, prepared by Gorove/Slade Associates, February 11, 1998.

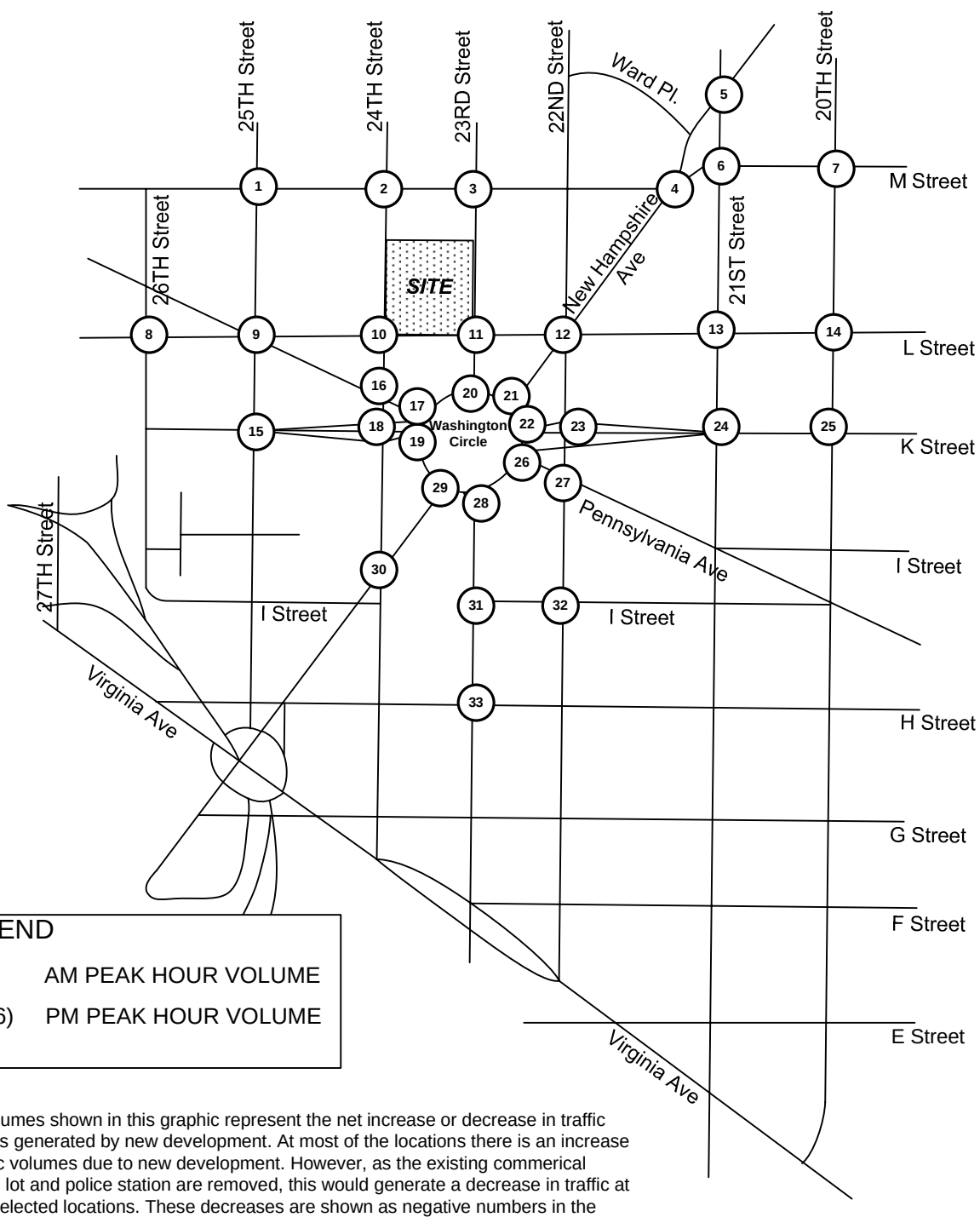


Not to Scale	N	Square 37 Rezoning	Directional Distributions for Residential Development at Site	FIGURE 16
September, 2002				



Not to Scale	N	Square 37 Rezoning	Directional Distributions for Commercial Development at Site	FIGURE 17
September, 2002				



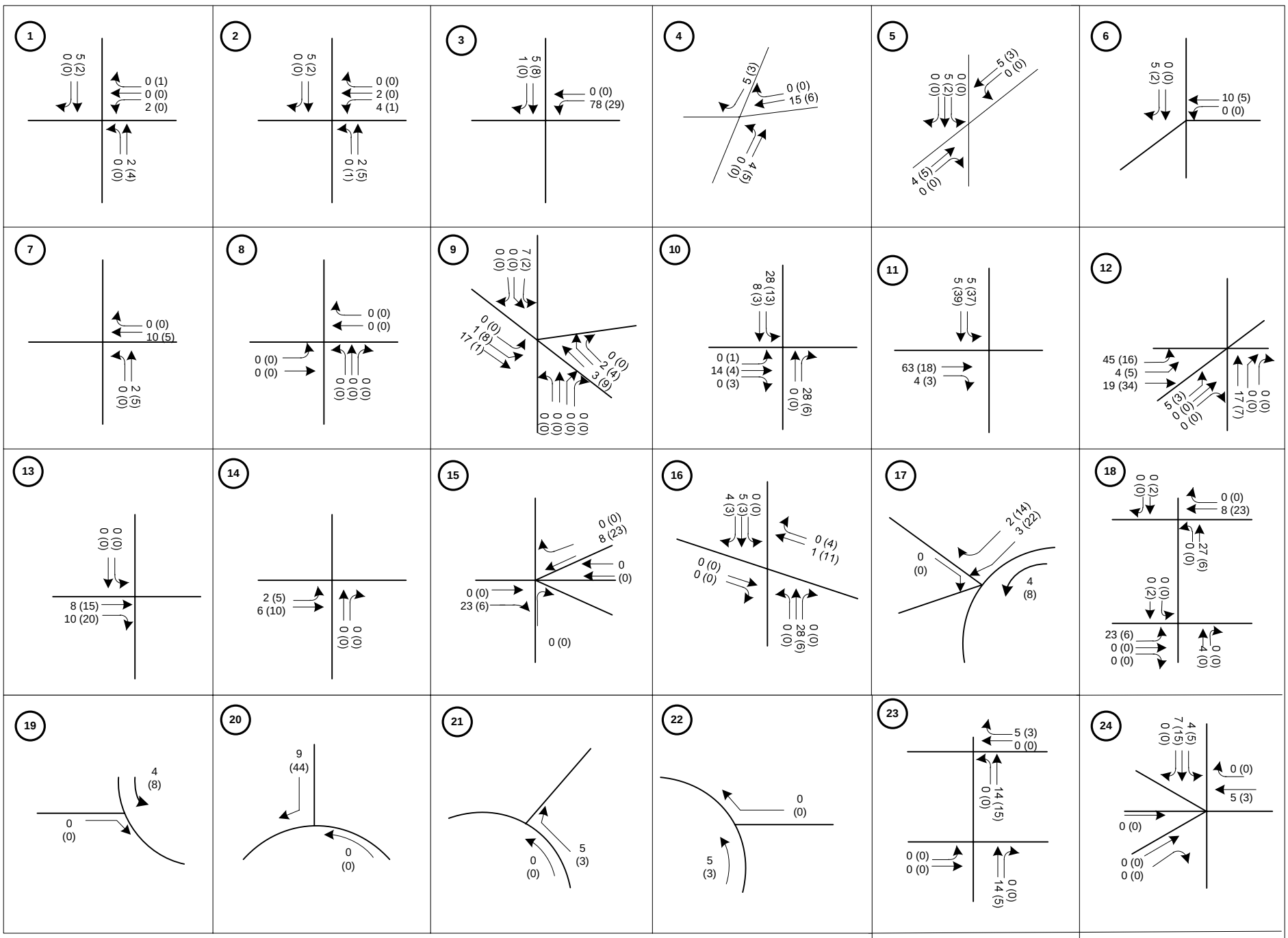


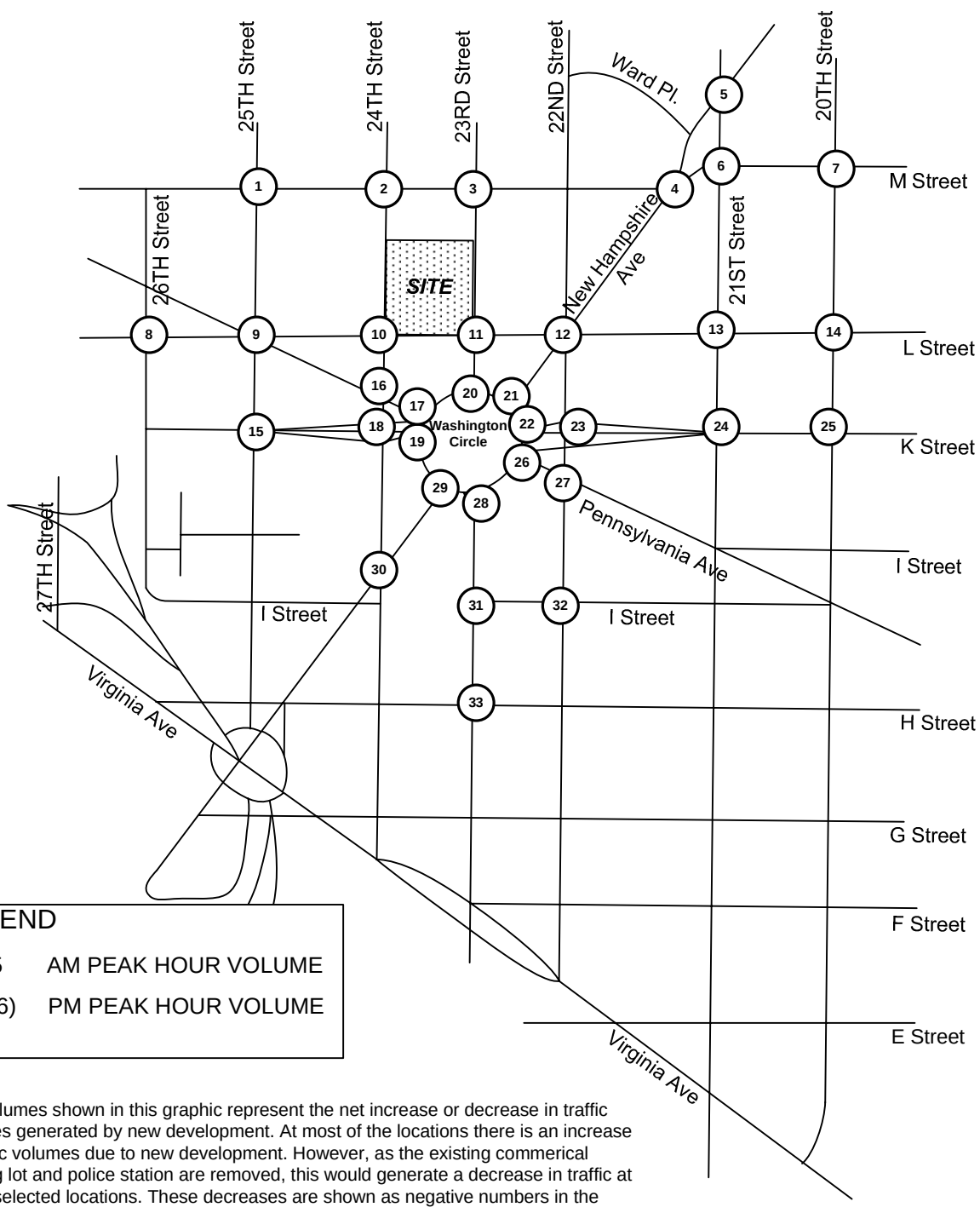
LEGEND

385	AM PEAK HOUR VOLUME
(456)	PM PEAK HOUR VOLUME

Note:
The volumes shown in this graphic represent the net increase or decrease in traffic volumes generated by new development. At most of the locations there is an increase in traffic volumes due to new development. However, as the existing commerical parking lot and police station are removed, this would generate a decrease in traffic at some selected locations. These decreases are shown as negative numbers in the graphic.

Not to Scale	N	**Square 37 Rezoning**	**AM and PM Peak Hour Volumes for Site Traffic - Option 1**	**FIGURE 18**
September, 2002				



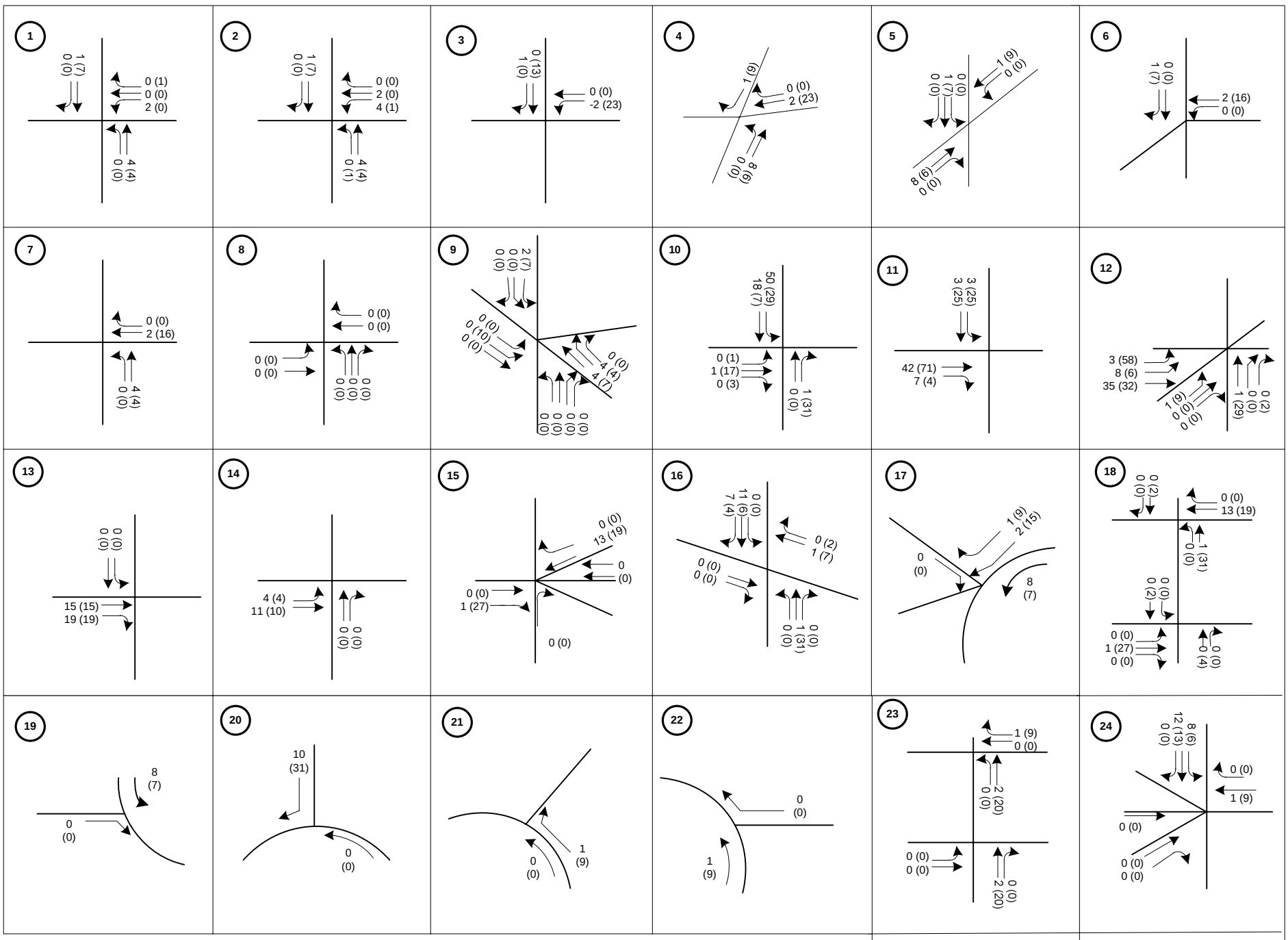


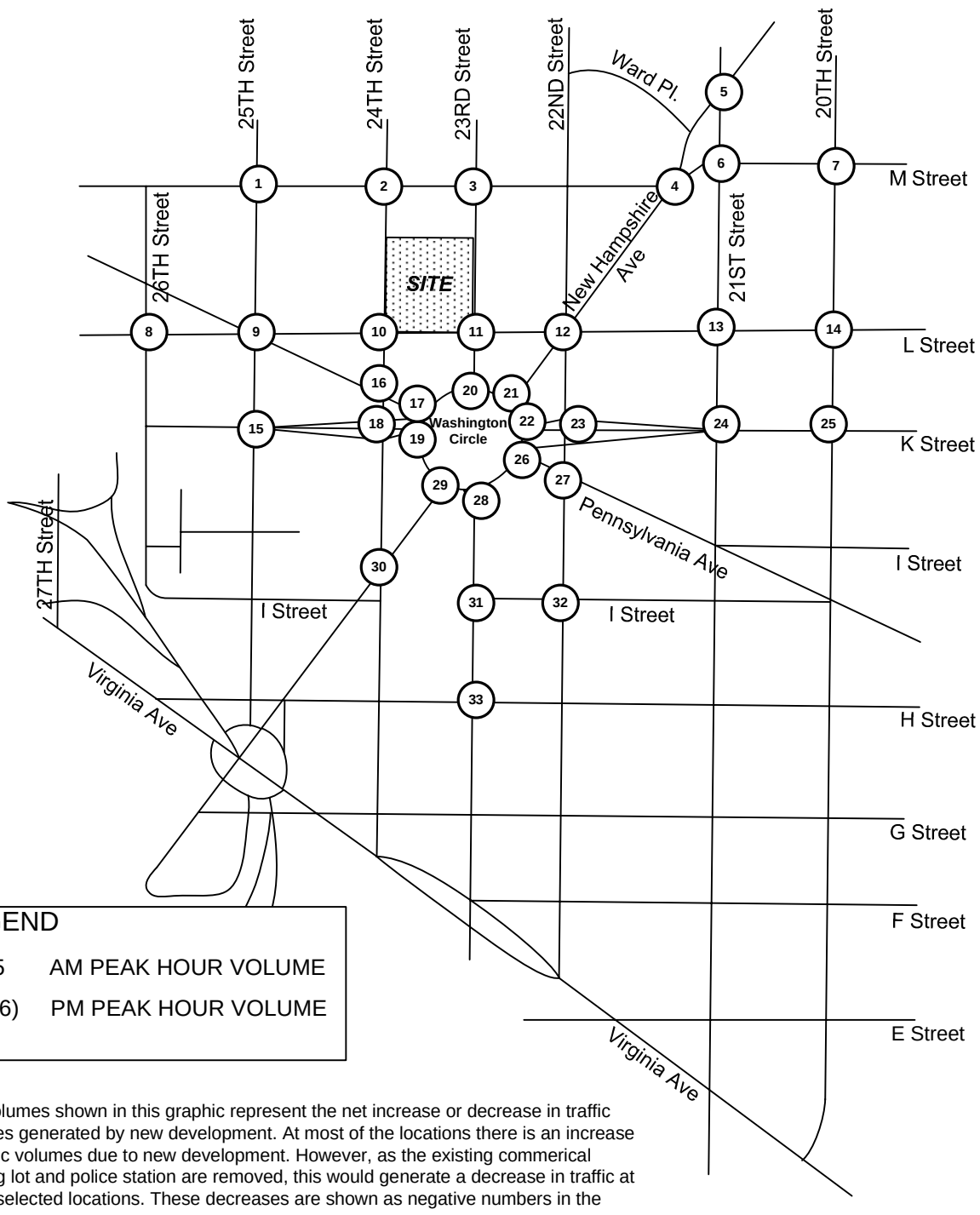
LEGEND

385	AM PEAK HOUR VOLUME
(456)	PM PEAK HOUR VOLUME

Note:
The volumes shown in this graphic represent the net increase or decrease in traffic volumes generated by new development. At most of the locations there is an increase in traffic volumes due to new development. However, as the existing commerical parking lot and police station are removed, this would generate a decrease in traffic at some selected locations. These decreases are shown as negative numbers in the graphic.

Not to Scale	N	**Square 37 Rezoning**	**AM and PM Peak Hour Volumes for Site Traffic - Option 2**	**FIGURE 19**
September, 2002				





LEGEND

385 AM PEAK HOUR VOLUME

(456) PM PEAK HOUR VOLUME

Note:
The volumes shown in this graphic represent the net increase or decrease in traffic volumes generated by new development. At most of the locations there is an increase in traffic volumes due to new development. However, as the existing commerical parking lot and police station are removed, this would generate a decrease in traffic at some selected locations. These decreases are shown as negative numbers in the graphic.

Not to Scale	N	**Square 37 Rezoning**	**AM and PM Peak Hour Volumes for Site Traffic - Option 3**	**FIGURE 20**
September, 2002				

The total number of trips for each of the development option was estimated under two conditions. The first condition assumed that New Hampshire Avenue between Washington Circle and M Street is maintained as a one-way street. The second condition assumed that New Hampshire Avenue between the circle and M Street is converted to two-way operation. The forecast volumes for these two conditions are different because the conversion to two-way operations would generate traffic diversions throughout the study area. Figure 21 displays the total AM and PM peak hour volumes for Option 1 without any modifications to the one-way operation on New Hampshire Avenue north of Washington Circle. Figure 22 shows the Option 1 forecasts with modified New Hampshire Avenue. Figures 23 and 24 display the total forecast volumes for the two New Hampshire Avenue operations for Option 2. Figures 25 and 26 show the total peak hour volumes for Option with one-way and two-way operations on New Hampshire Avenue.

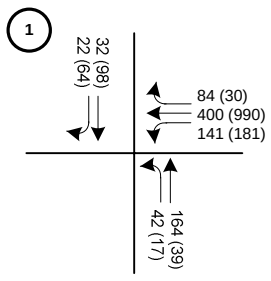
The total assigned volumes for the three options, shown in Figures 21 through 26, reflect minor increases in traffic volumes, with respect to existing conditions, at the intersections in the immediate vicinity of the site. However, traffic volumes at some of the approaches to Washington Circle are significantly larger than existing traffic counts for all of the three development options. Most of the traffic increases, however, are due to new trips generated by other area development than by the trips generated at the rezoning site.

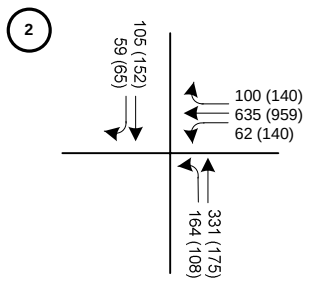
SITE IMPACTS

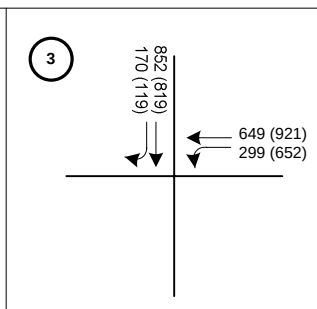
The Study Team evaluated the impacts of the site development traffic on the intersections in the immediate vicinity of the site. The site impacts indicate what proportion of the forecast total traffic at a particular intersection is generated by new site traffic. The Study Team calculated the site impacts by dividing the additional site generated traffic by the total forecast traffic at each intersection.

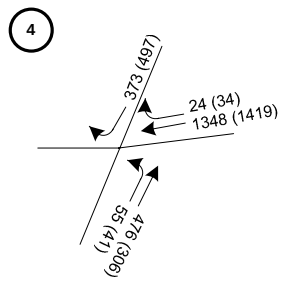
The Study Team calculated the site impacts under two conditions. One condition assumes that New Hampshire Avenue continues to operate as a one-way street and the other condition assumes that New Hampshire Avenue between Washington Circle and M Street is converted to two-way operations.

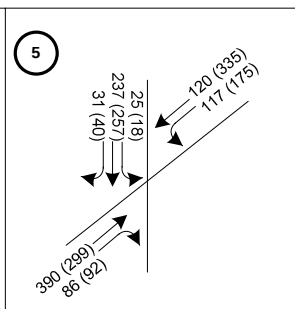
Site impacts of less than five percent are low and generally reflect negligible effects on traffic operations and delays. Site impacts between five and 15 percent are moderate and minor effects on traffic operations and delays are expected at intersections with site impacts at these levels. Site impacts of more than 15 percent are significant and generally result in significant degradation of traffic operations and increased delays. The intersections most affected by the site traffic are those located in the immediate vicinity of the site. Site impacts generally decrease with increase distance to the site that generates the trips.

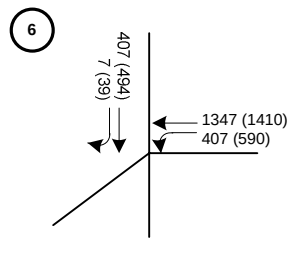


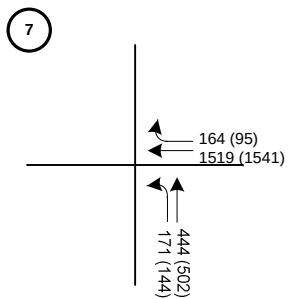


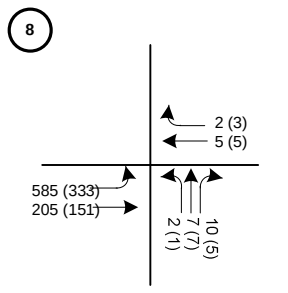


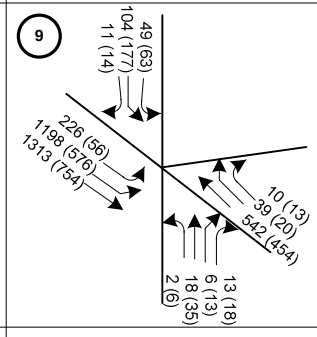


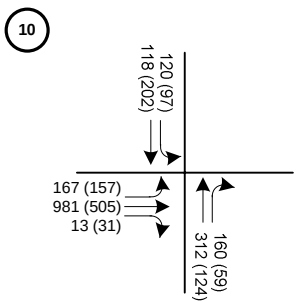


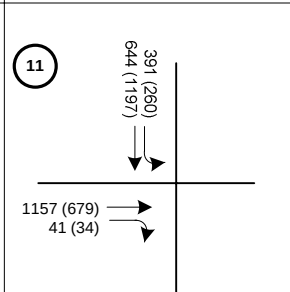


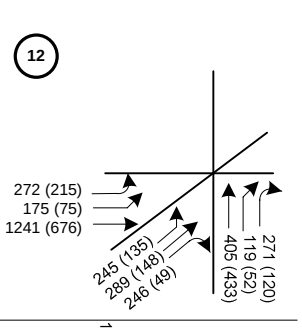


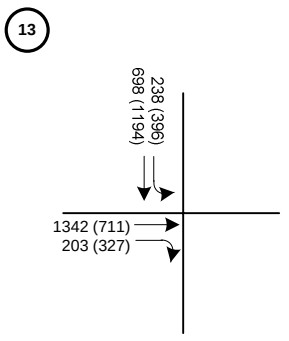


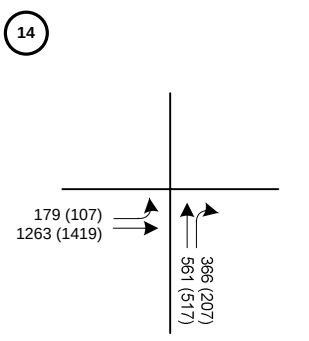


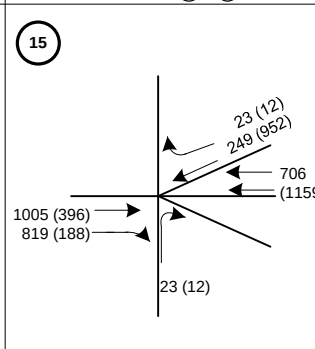


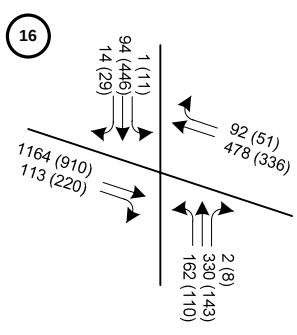


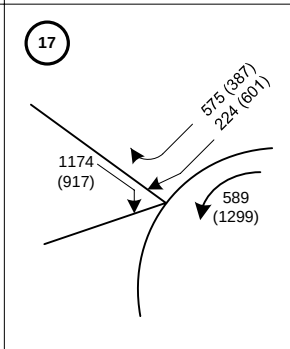


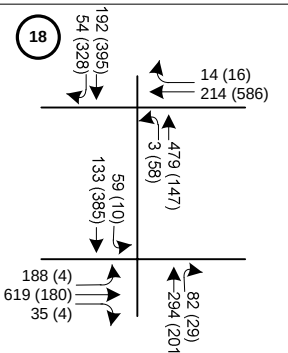


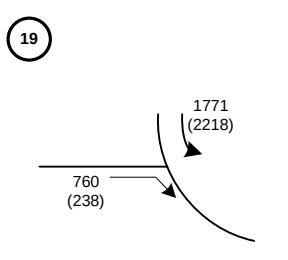


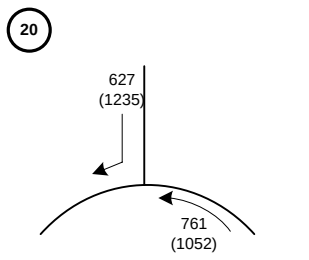


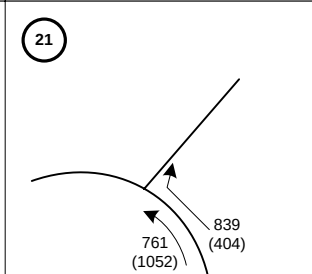


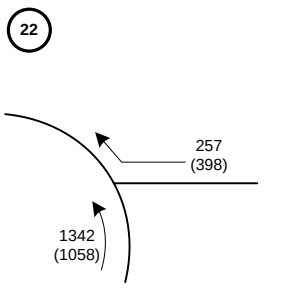


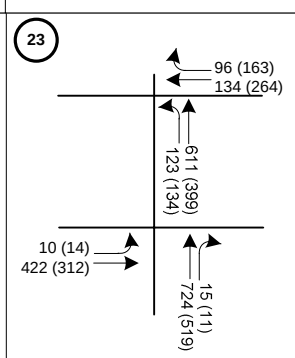


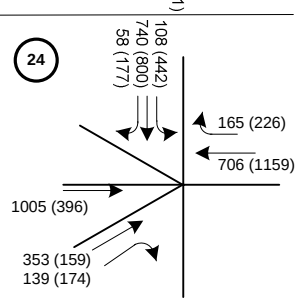


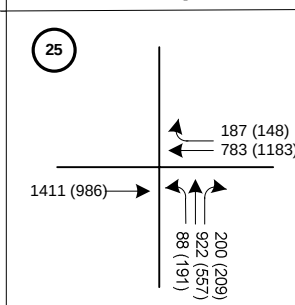


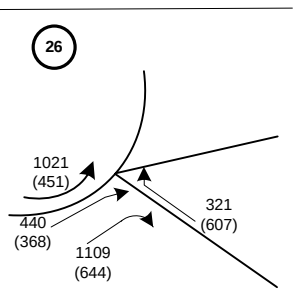


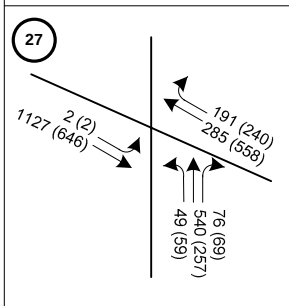


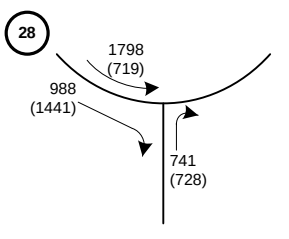


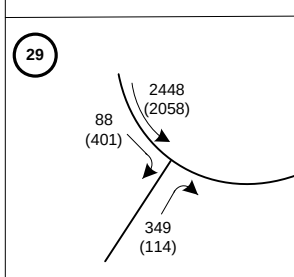


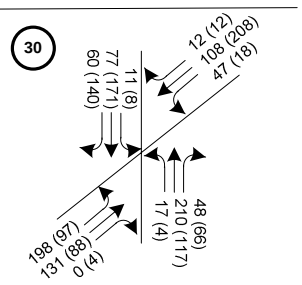


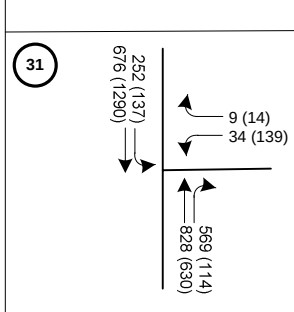


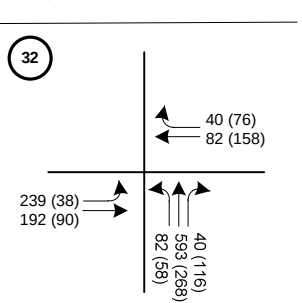


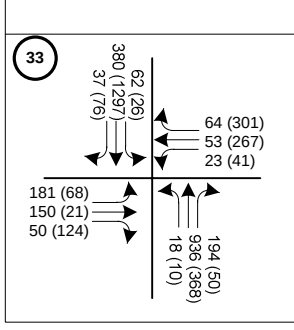


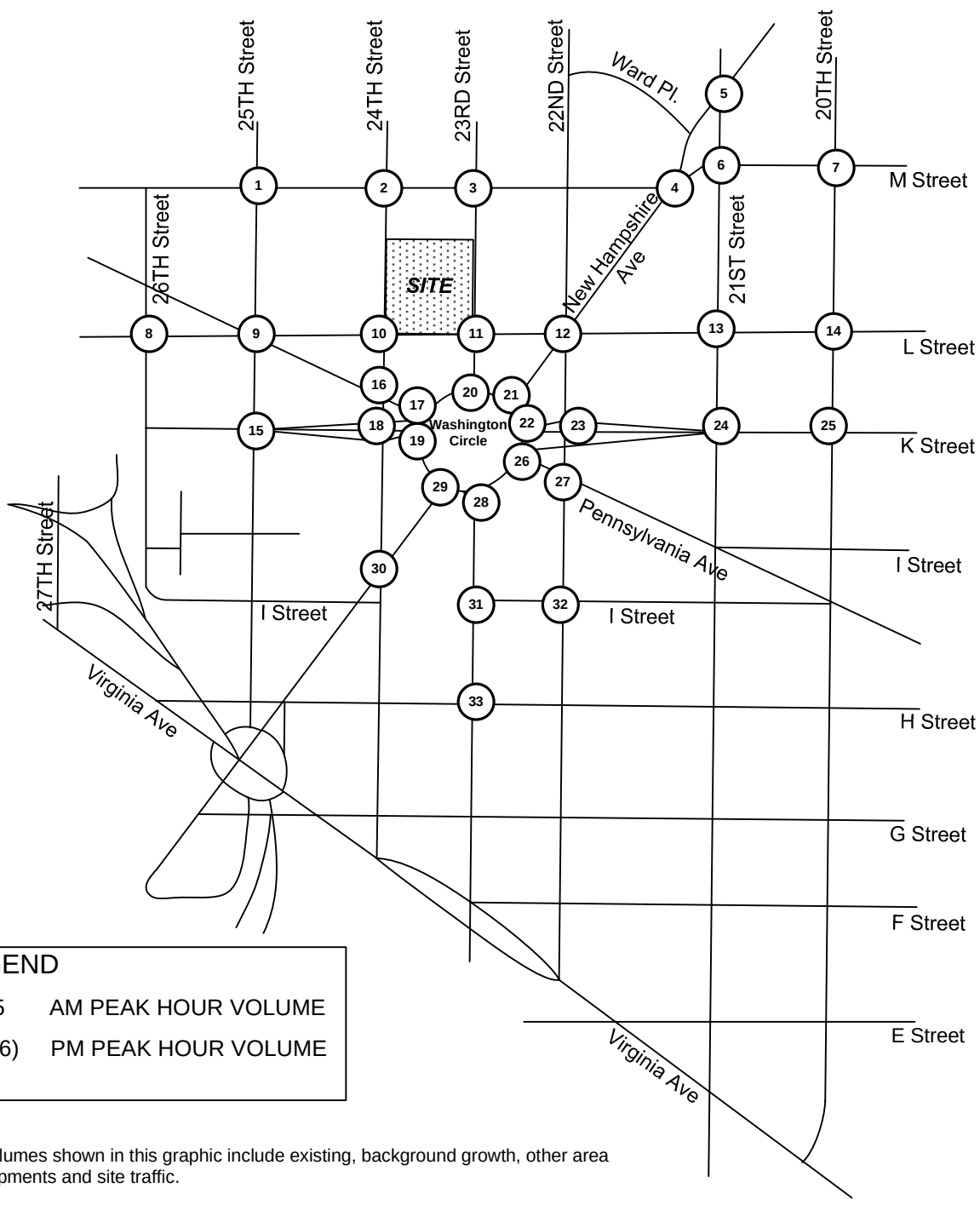










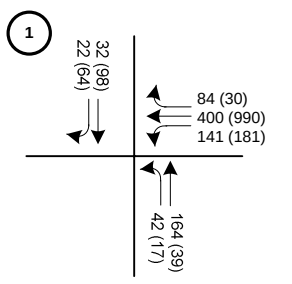


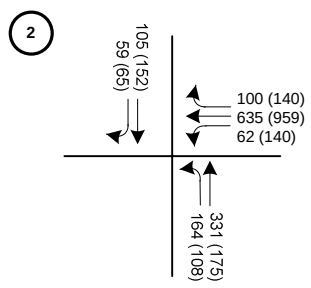
LEGEND

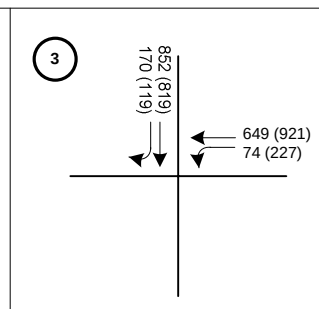
385	AM PEAK HOUR VOLUME
(456)	PM PEAK HOUR VOLUME

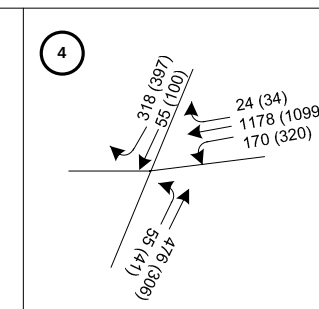
Note:
The volumes shown in this graphic include existing, background growth, other area developments and site traffic.

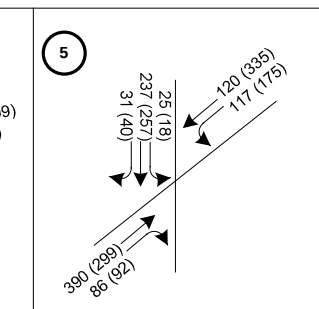
Not to Scale	N	**Square 37 Rezoning**	**Total AM and PM Peak Hour Volumes for Option 1**	**FIGURE 21**
September, 2002				

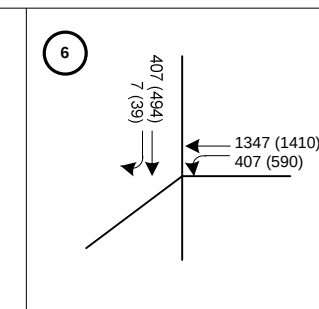


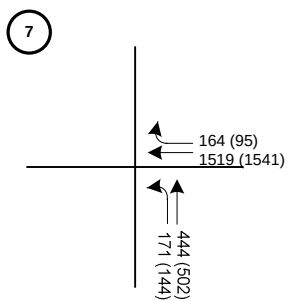


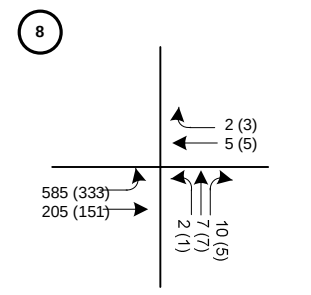


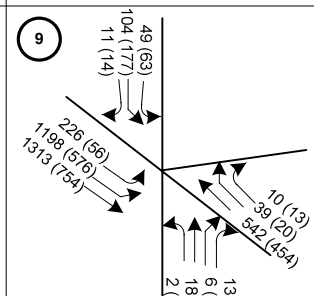


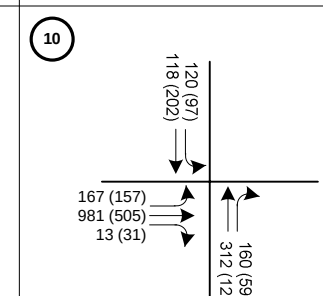


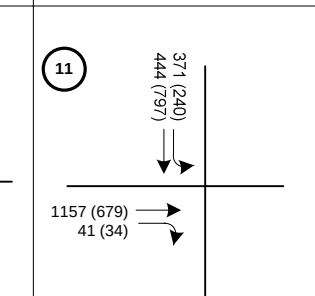


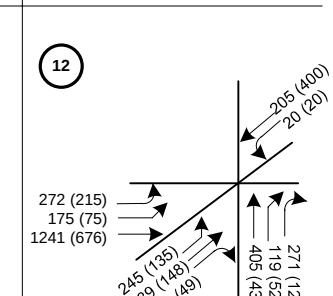


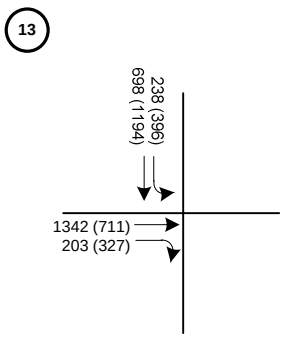


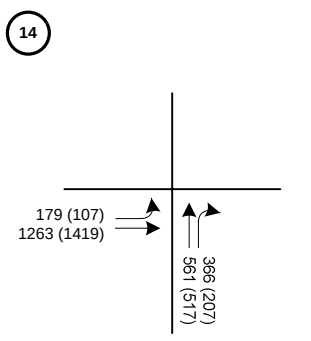


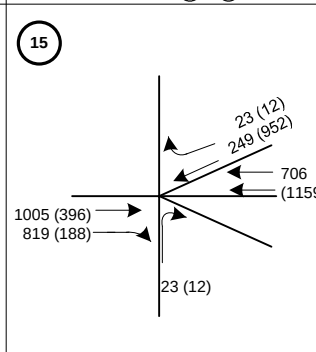


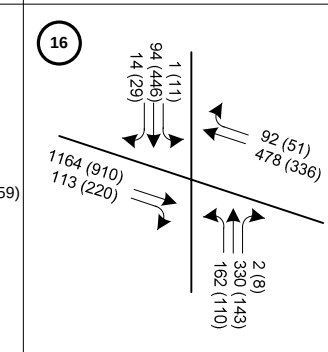


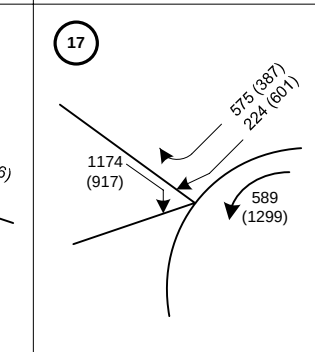


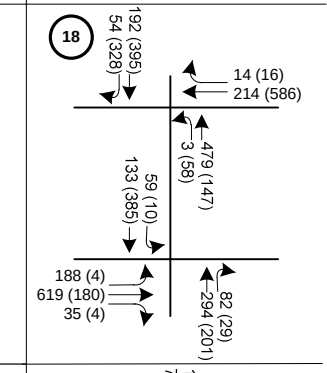


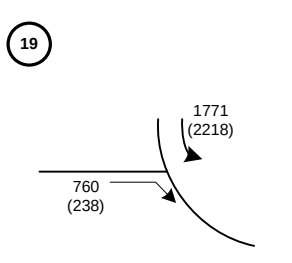


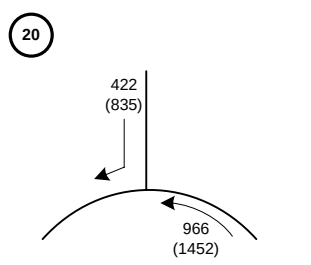


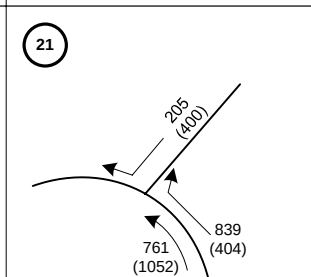


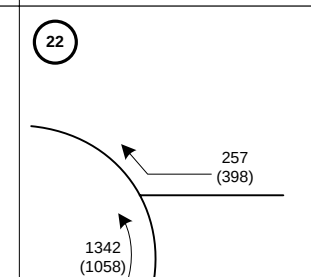


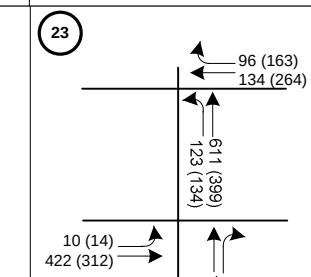


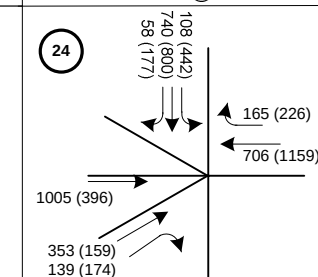


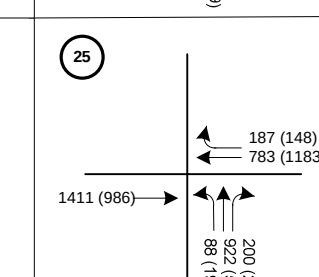


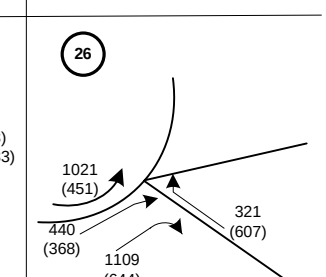


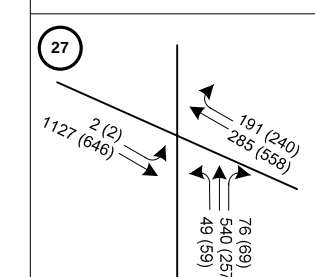


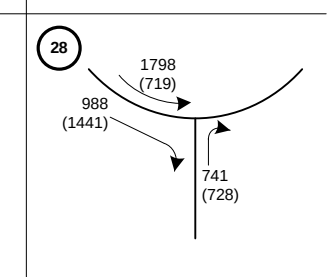


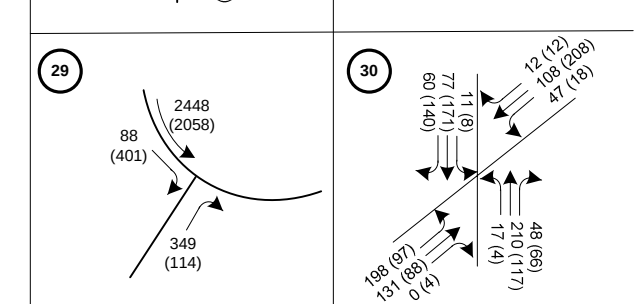


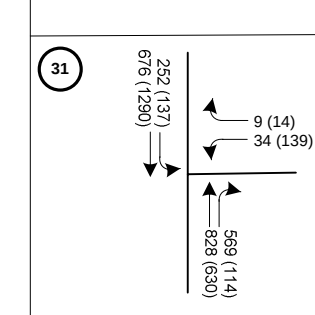


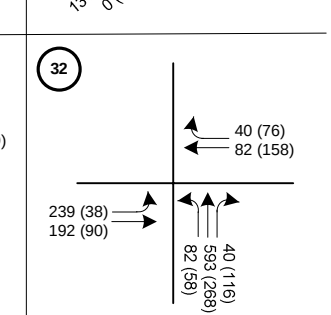


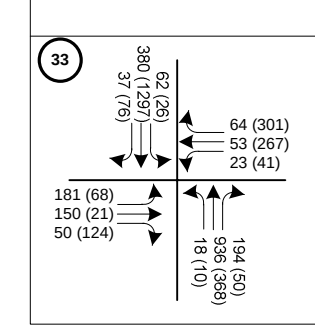


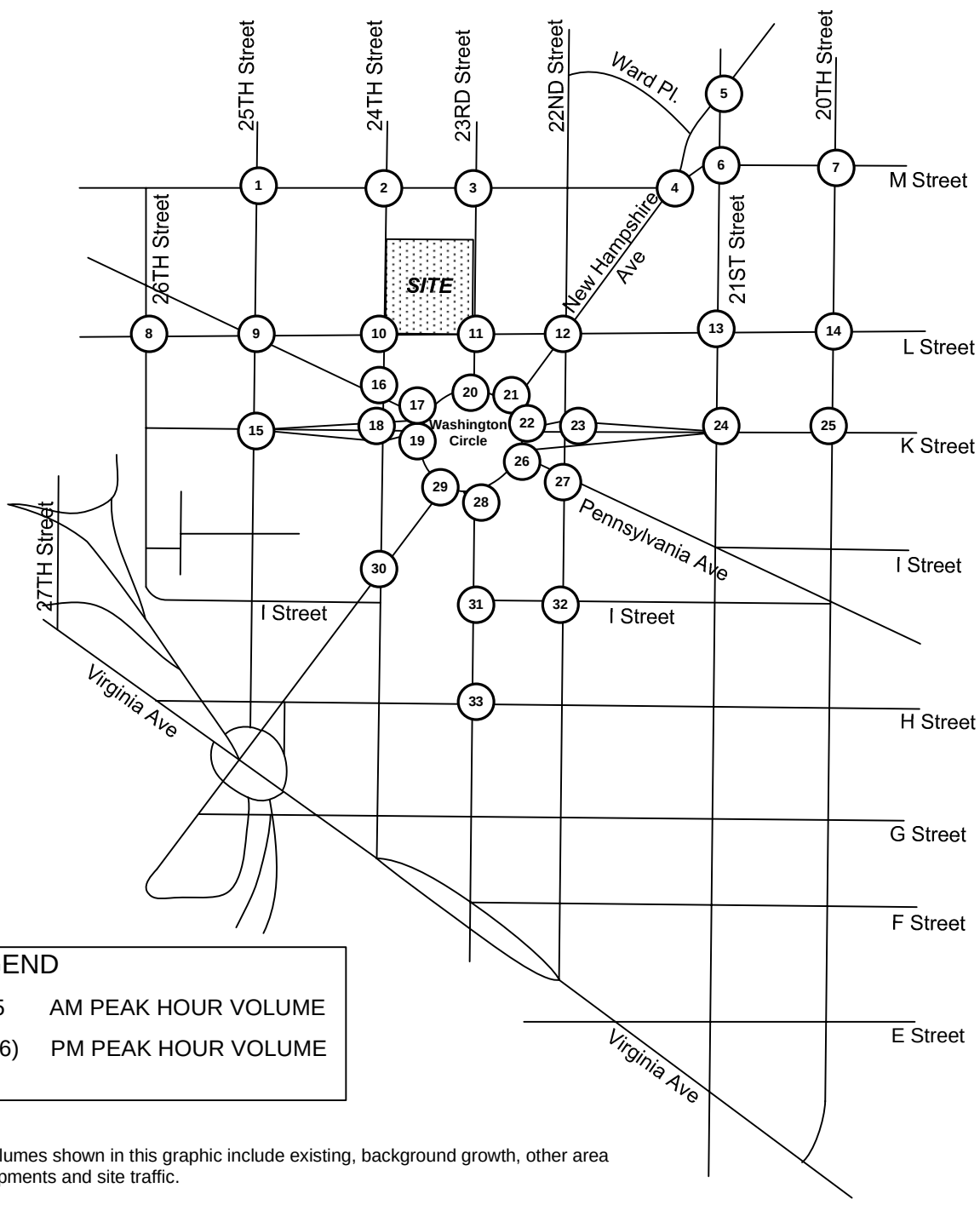










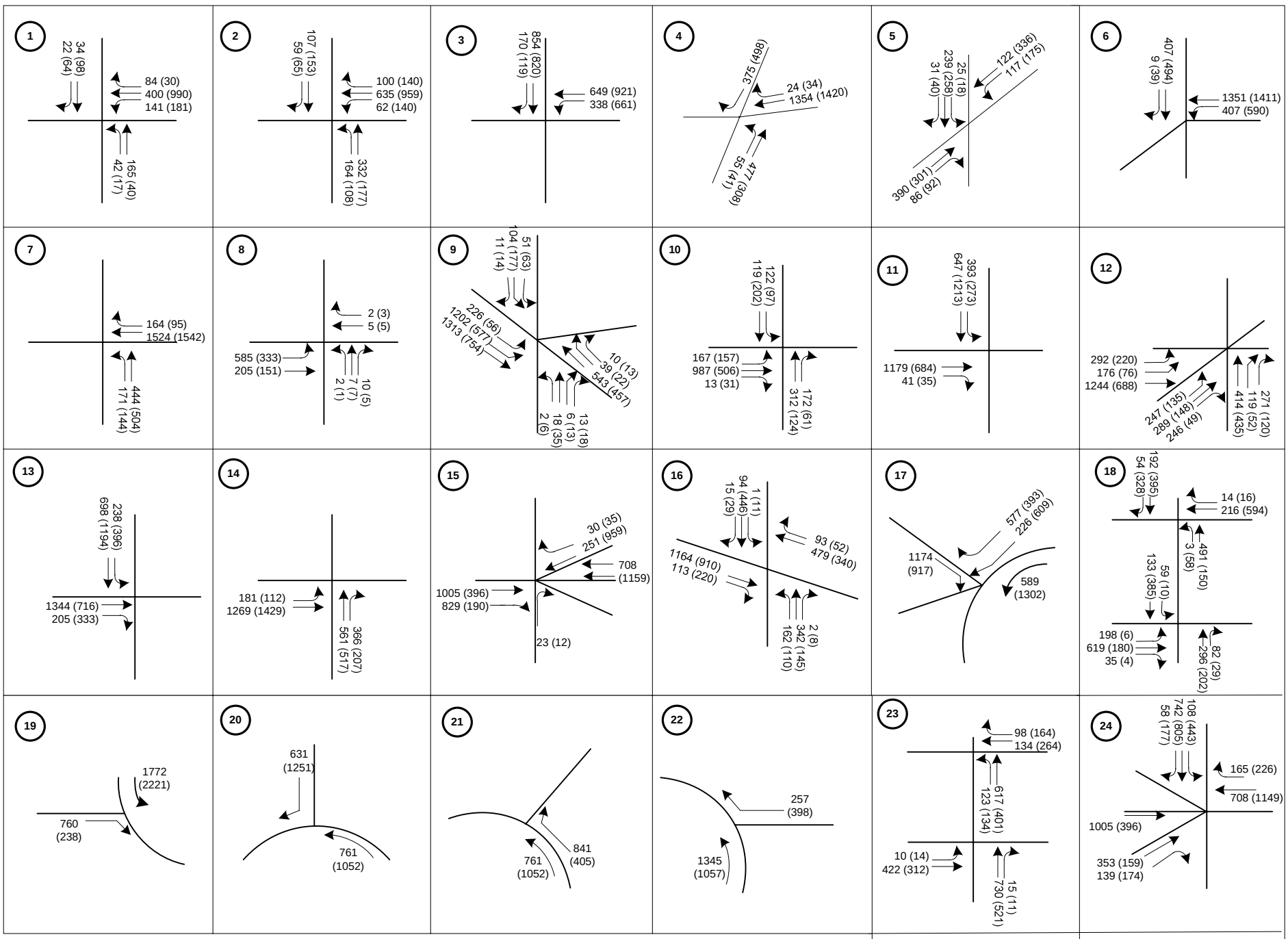


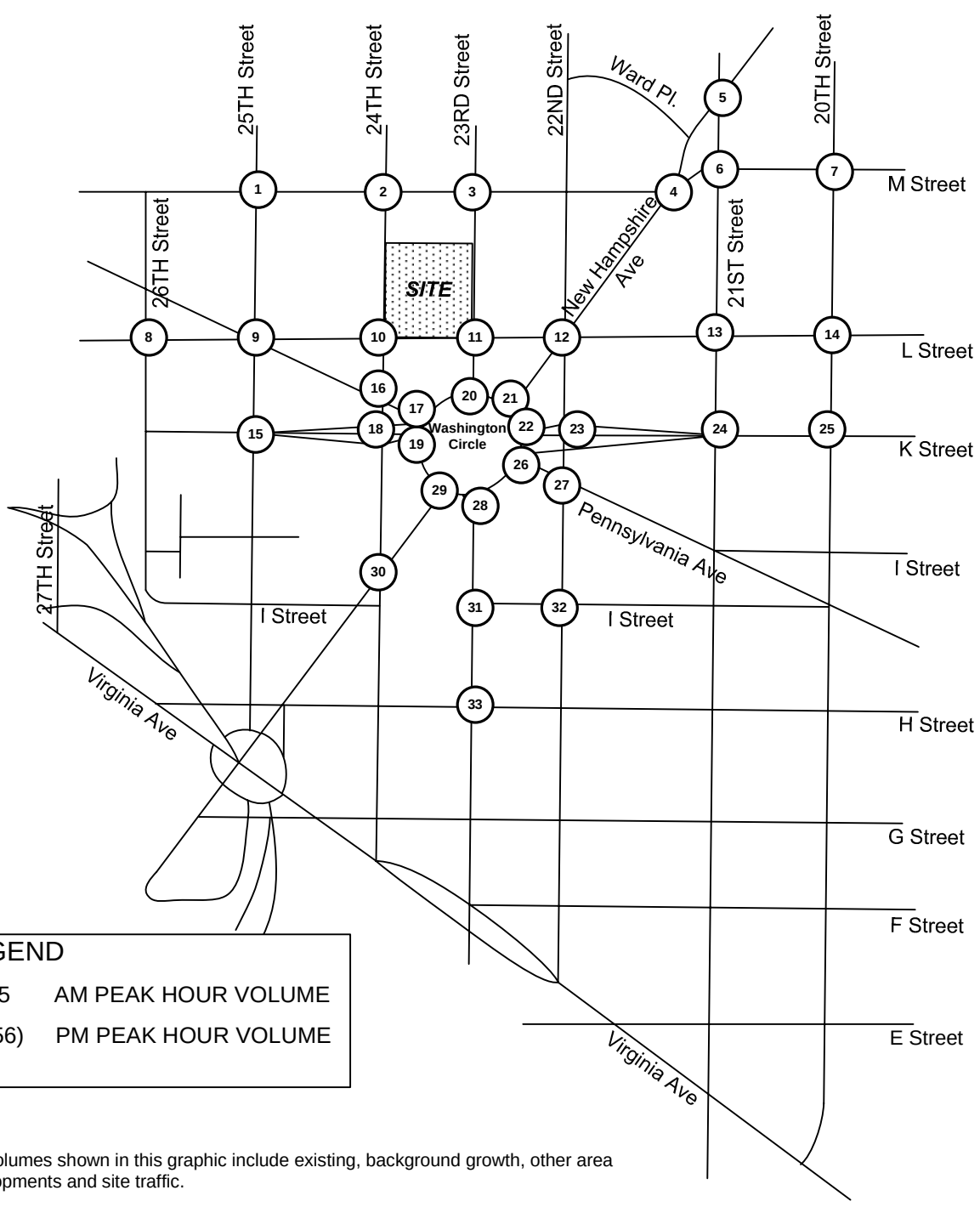
LEGEND

385	AM PEAK HOUR VOLUME
(456)	PM PEAK HOUR VOLUME

Note:
The volumes shown in this graphic include existing, background growth, other area developments and site traffic.

Not to Scale September, 2002	N	**Square 37 Rezoning**	**Total AM and PM Peak Hour Volumes for Option 1 with Two-way New Hampshire Ave**	**FIGURE 22**





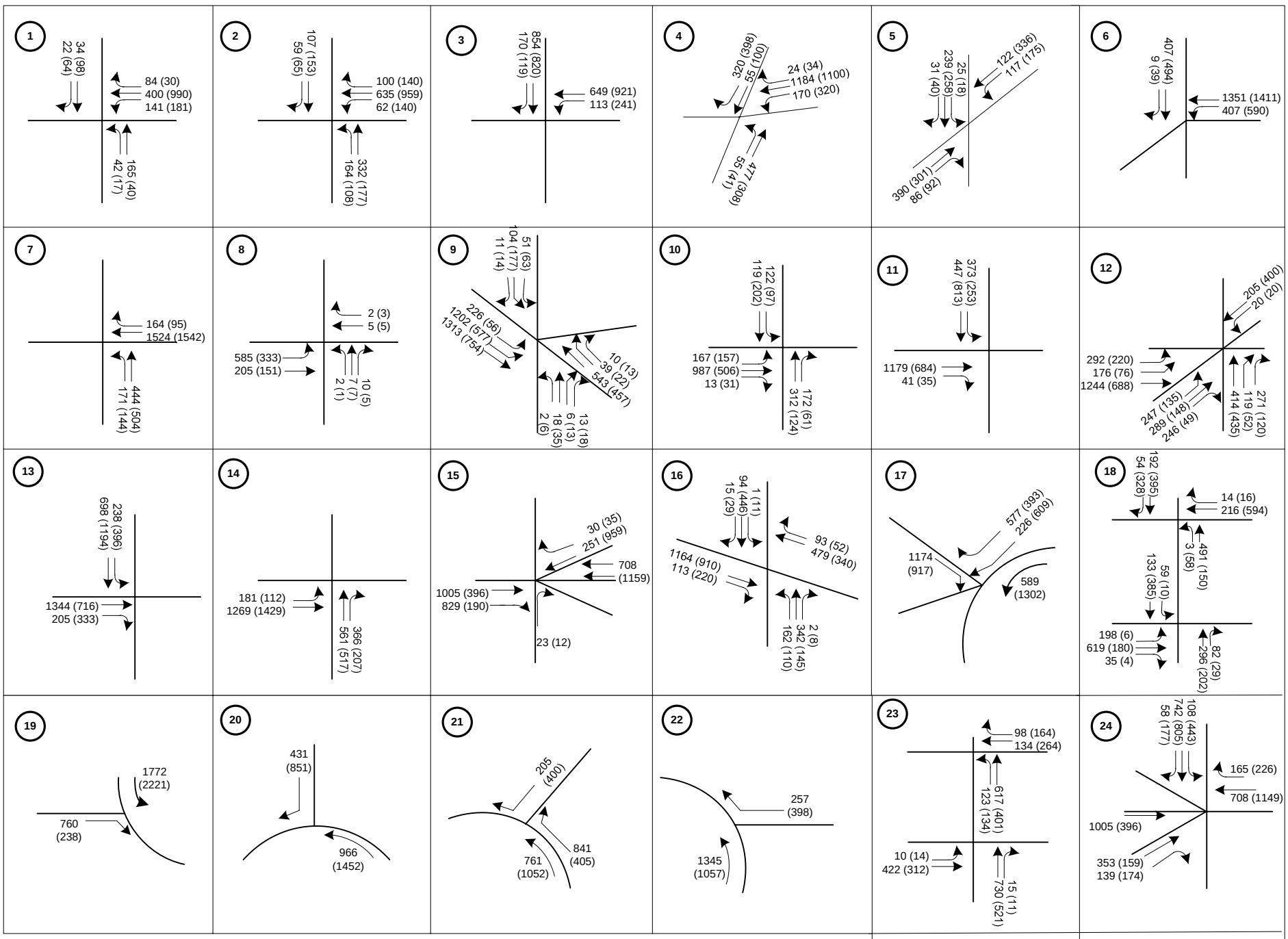
LEGEND

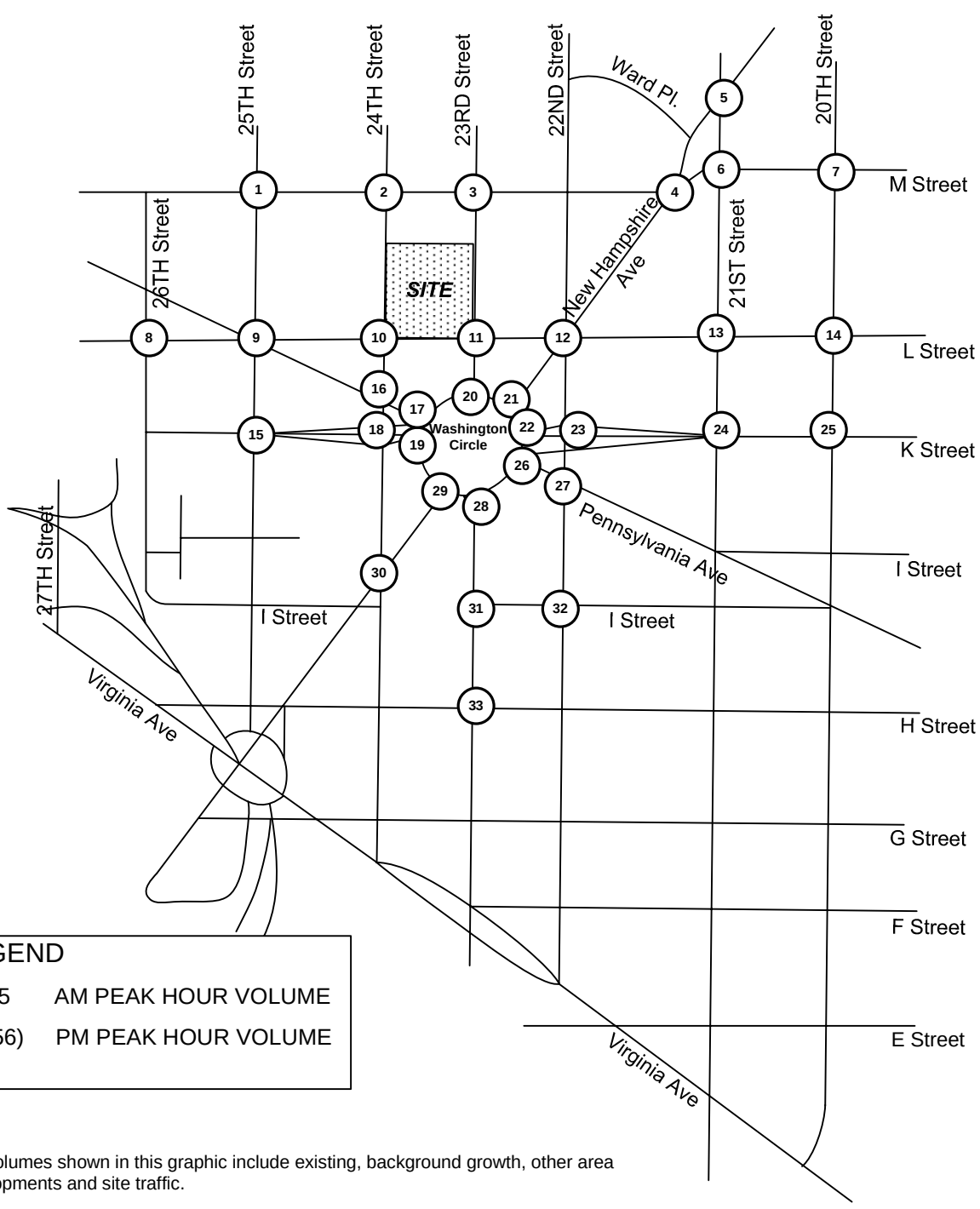
385 AM PEAK HOUR VOLUME

(456) PM PEAK HOUR VOLUME

Note:
The volumes shown in this graphic include existing, background growth, other area developments and site traffic.

Not to Scale	N	**Square 37 Rezoning**	**Total AM and PM Peak Hour Volumes for Option 2**	**FIGURE 23**
September, 2002				





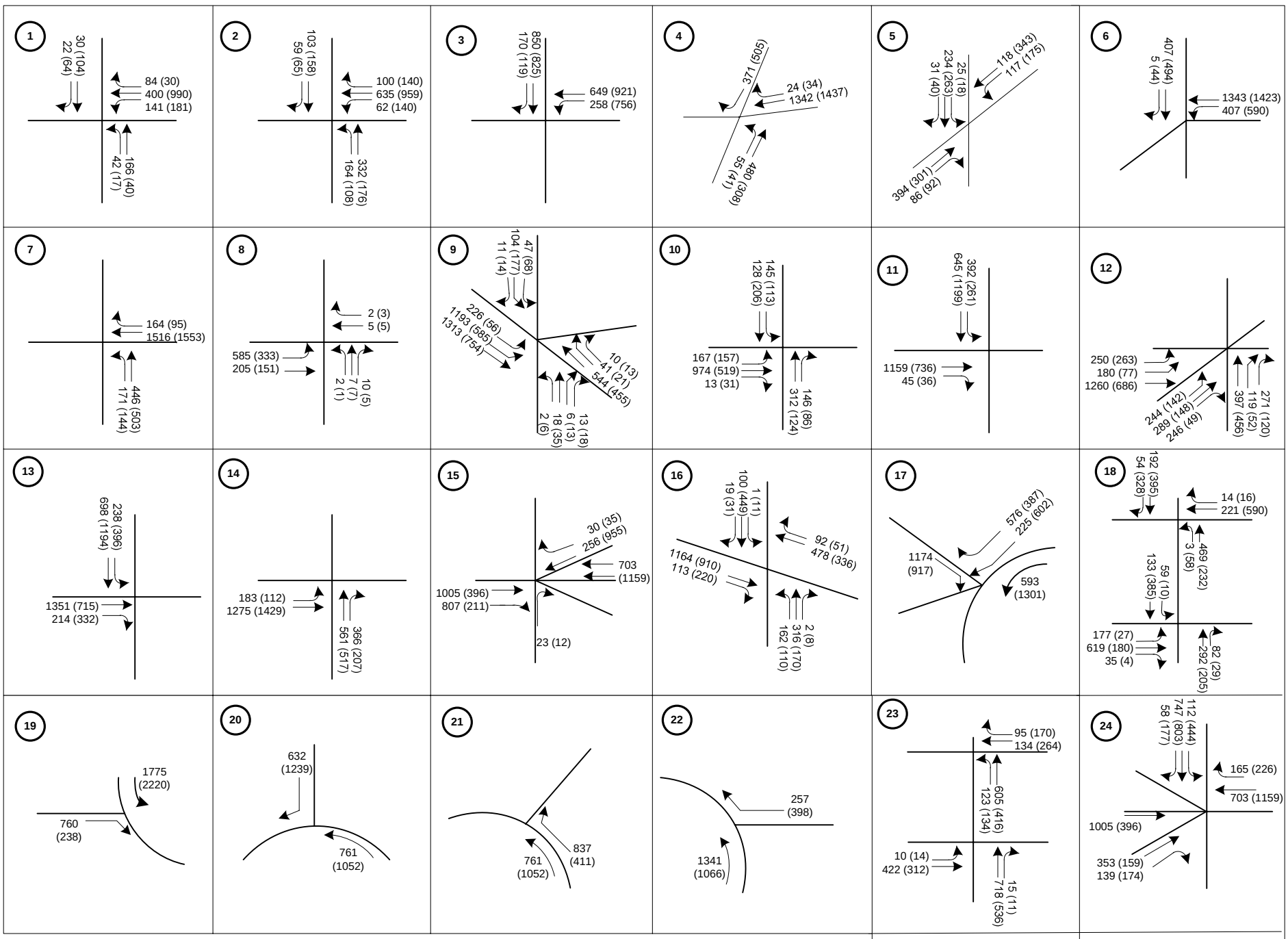
LEGEND

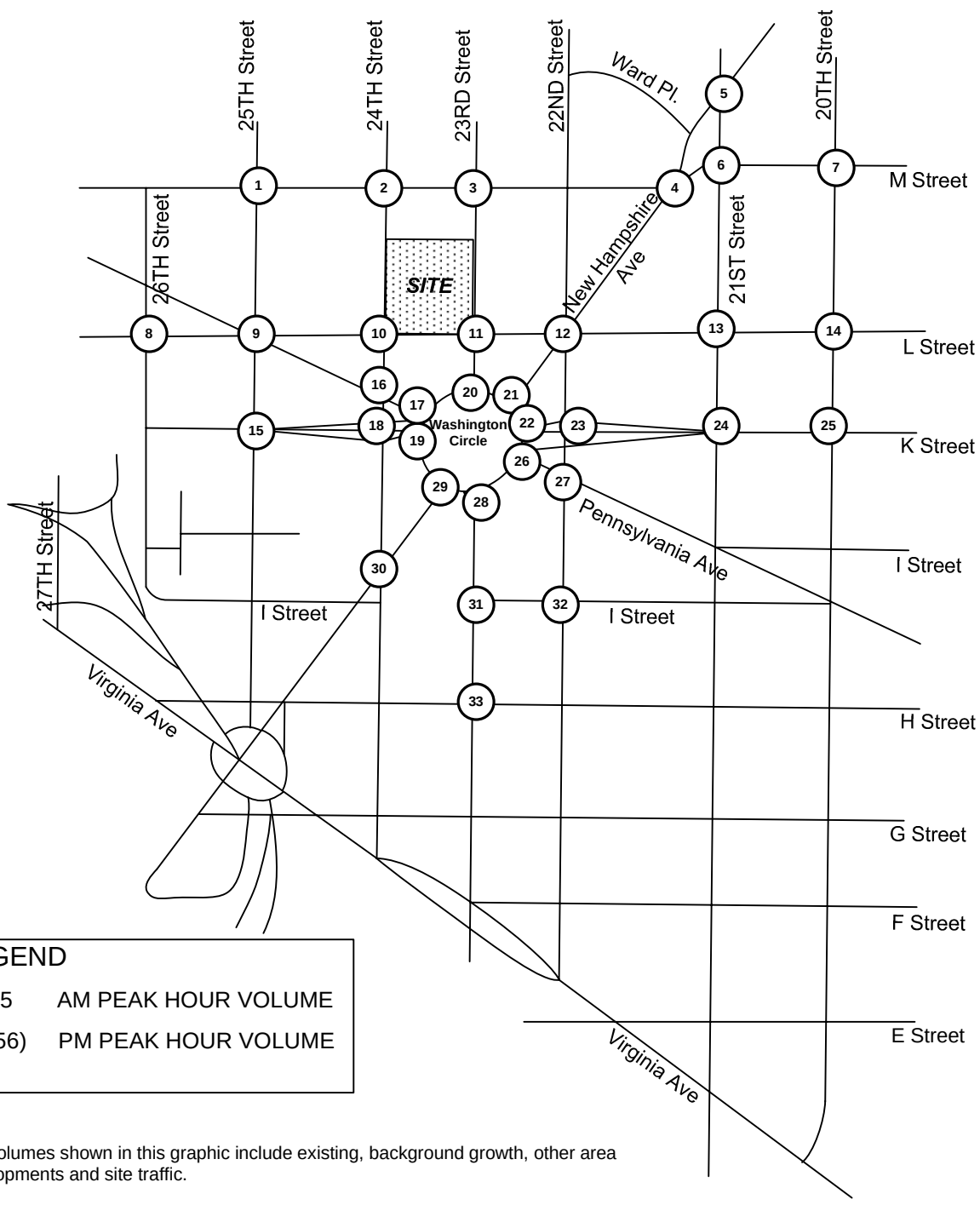
385 AM PEAK HOUR VOLUME

(456) PM PEAK HOUR VOLUME

Note:
The volumes shown in this graphic include existing, background growth, other area developments and site traffic.

Not to Scale	N	**Square 37 Rezoning**	**Total AM and PM Peak Hour Volumes for Option 2 with Two-way New Hampshire Ave**	**FIGURE 24**
September, 2002				



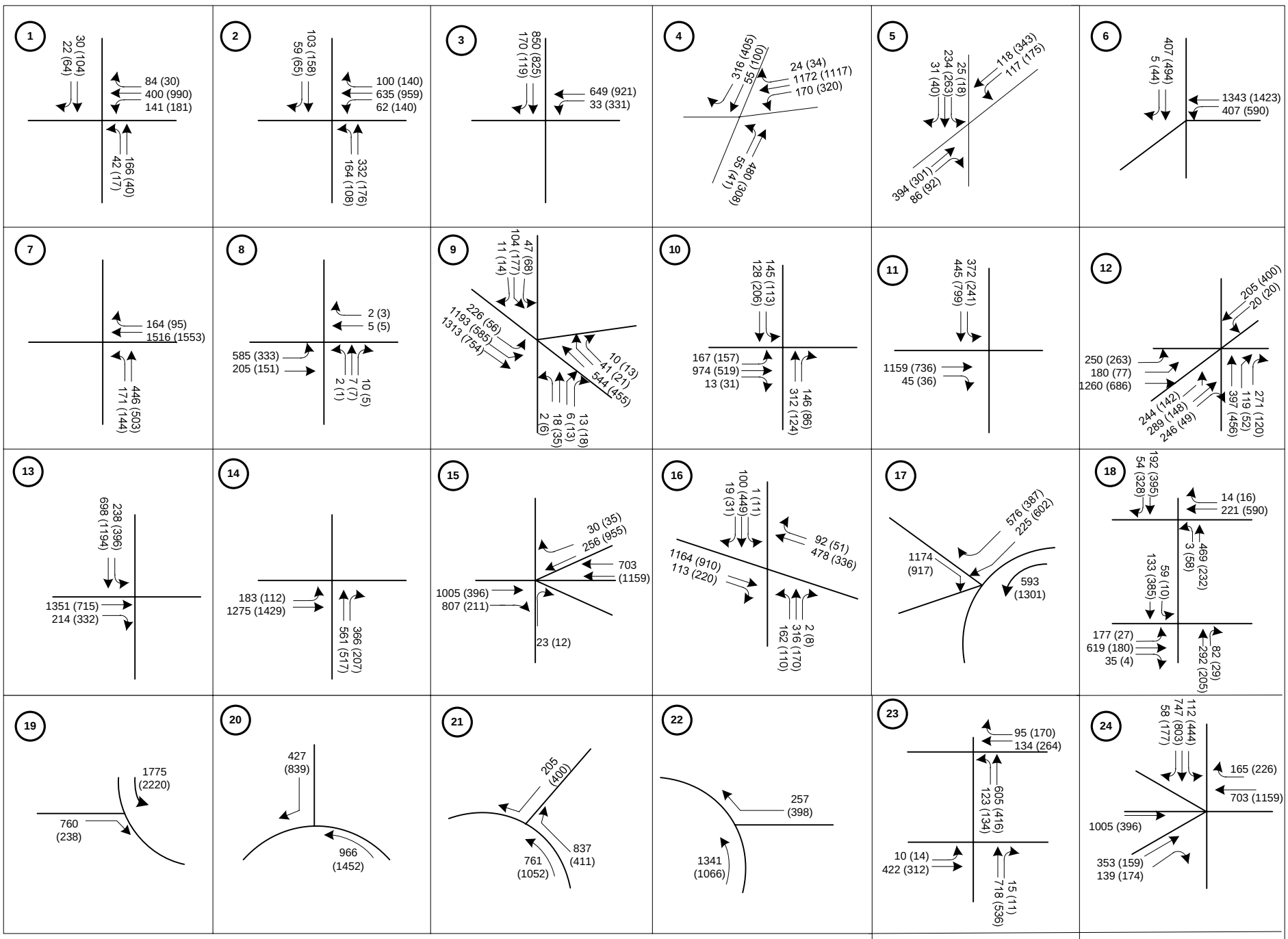


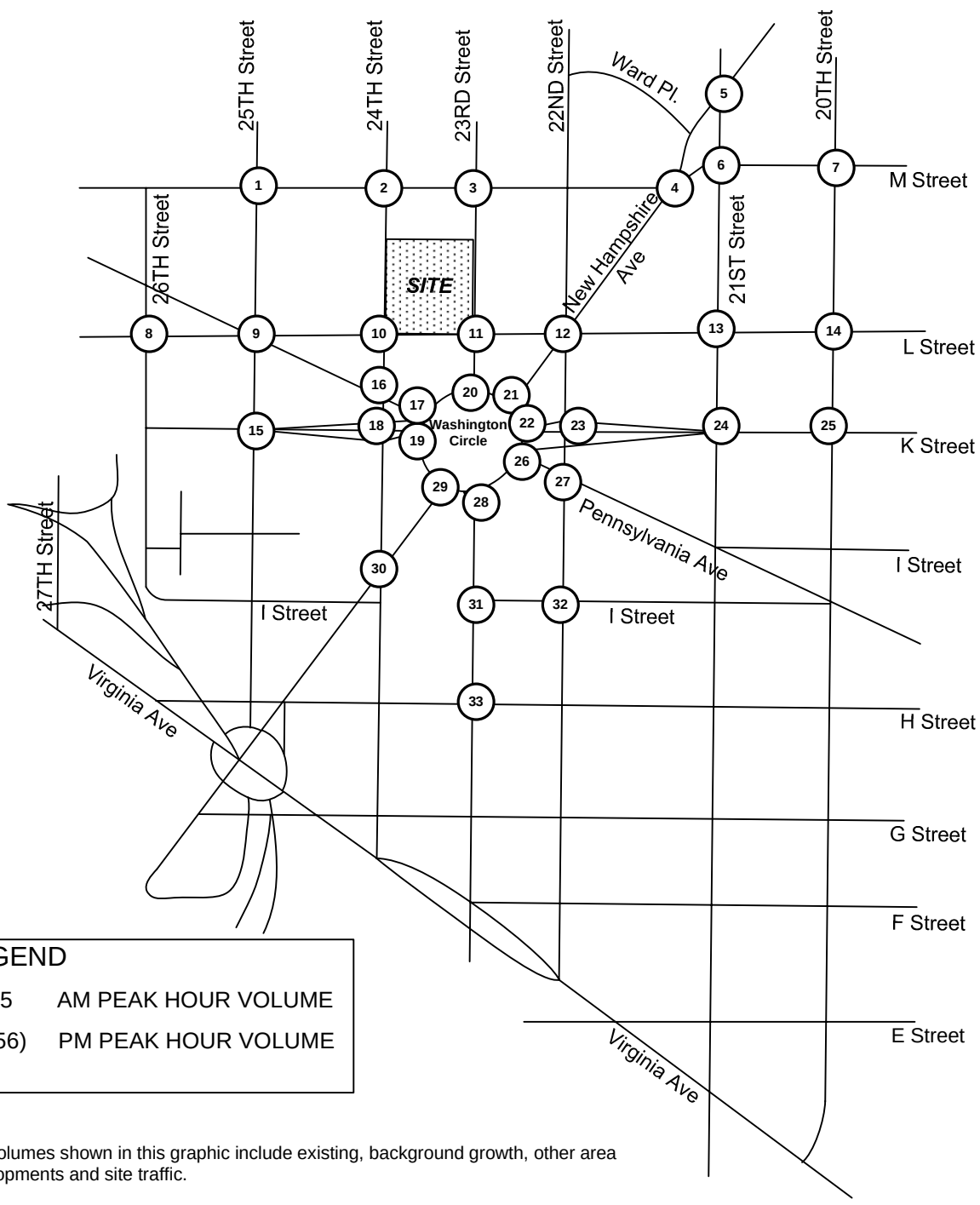
LEGEND

385	AM PEAK HOUR VOLUME
(456)	PM PEAK HOUR VOLUME

Note:
The volumes shown in this graphic include existing, background growth, other area developments and site traffic.

Not to Scale	N	**Square 37 Rezoning**	**Total AM and PM Peak Hour Volumes for Option 3**	**FIGURE 25**
September, 2002				





LEGEND

385	AM PEAK HOUR VOLUME
(456)	PM PEAK HOUR VOLUME

Note:
The volumes shown in this graphic include existing, background growth, other area developments and site traffic.

Not to Scale September, 2002	N	**Square 37 Rezoning**	**Total AM and PM Peak Hour Volumes for Option 3 with Two-way New Hampshire Ave**	**FIGURE 26**

As shown in Figures 27 and 28, the site impacts for Options 1 and 2 are estimated to be less than five percent at the intersections in the immediate vicinity of the rezoning site during the AM and PM peak hours. Contrastingly, the site impacts for Option 3 at several intersections in the vicinity of the site are expected to be more than five percent but less than 10 percent during the PM peak hour. As Figures 27 and 28 indicate, the intersections most affected by Option 3 traffic are New Hampshire Avenue and L Street, 23rd Street and L Street, 23rd Street and M Street, and 24th Street and M Street. This indicates that the implementation of Options 1 and 2 is expected to have a negligible effect on traffic conditions in the study area and Option 3 is expected to have a marginal negative effect on traffic operations and delays.

FUTURE LEVELS OF SERVICE WITH SITE DEVELOPMENT

As noted previously in this document, the Study Team conducted the analysis for future conditions for the year 2007. This assumes that the new development at the site would be completed by 2007. As described in the existing conditions section of this document, there are several intersections in the Study Area operating at LOS F during the AM and PM peak hours. Therefore, the Study Team made recommendations with respect to improvements needed to address existing deficiencies. Thus, the level of service calculations for all future year scenarios were conducted assuming that the improvements to address existing conditions would be in place.

The Study Team calculated levels of service at all of the Study Area intersections with the traffic forecasted for each of the site development options. As shown in Table 7, compared to existing conditions, the implementation of Options 3 would result in slight degradation in LOS at approximately one-third of the study area intersections during the AM peak hour. The implementation of Option 2 would result in slight degradation in LOS at approximately two-thirds of the study area intersections during the AM peak hour. The implementation of Option 1 would result in slight degradation in LOS at approximately one-quarter of the study area intersections during the AM peak hour. Generally, the degradation in traffic operations corresponds to one grade in the LOS scale; i.e., intersections that are currently operating at LOS A degrade to LOS B with the new site development. As Table 8 indicates, compared to existing conditions, the PM peak hour LOS for Options 1, 2 and 3 is expected to degrade, generally by one letter grade, for approximately one-third of the Study Area intersections. It is important to note that at most of the intersections where the LOS degrades during the AM and PM peak hours, the resulting LOS is expected to be at acceptable levels.

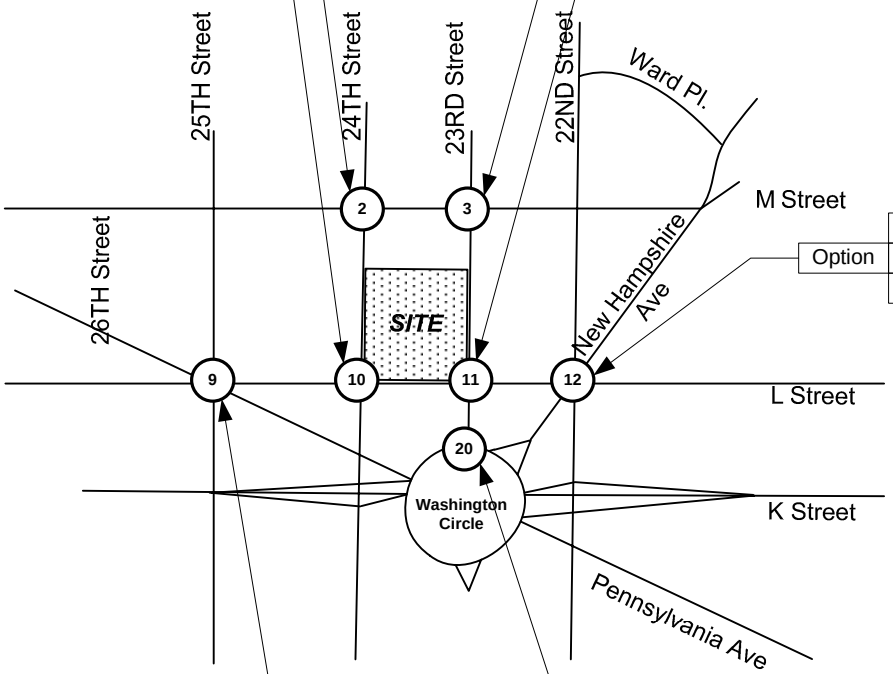
Therefore, the Study Team concludes that there are insignificant differences on the effects on traffic operations between Options 1 and 2. The implementation of Option 3, however, would result in marginally worse traffic conditions than the conditions expected to occur under Options 1 and 2. Furthermore, the assessment of the three options indicates that no additional mitigation measures, other than the ones recommended to address existing conditions, need to be implemented to accommodate either Option 1, Option 2 or Option 3 level of development.

Option	AM Peak Hour			PM Peak Hour		
	1	2	3	1	2	3
	0.7%	0.9%	0.7%	0.4%	0.5%	0.7%

Option	AM Peak Hour			PM Peak Hour		
	1	2	3	1	2	3
	2.2%	4.1%	0.0%	1.1%	1.5%	5.2%

Option	AM Peak Hour			PM Peak Hour		
	1	2	3	1	2	3
	2.9%	4.1%	3.7%	2.1%	2.5%	7.1%

Option	AM Peak Hour			PM Peak Hour		
	1	2	3	1	2	3
	2.1%	3.3%	2.5%	2.9%	4.4%	5.6%



Option	AM Peak Hour			PM Peak Hour		
	1	2	3	1	2	3
	1.7%	2.7%	1.5%	2.4%	3.5%	6.8%

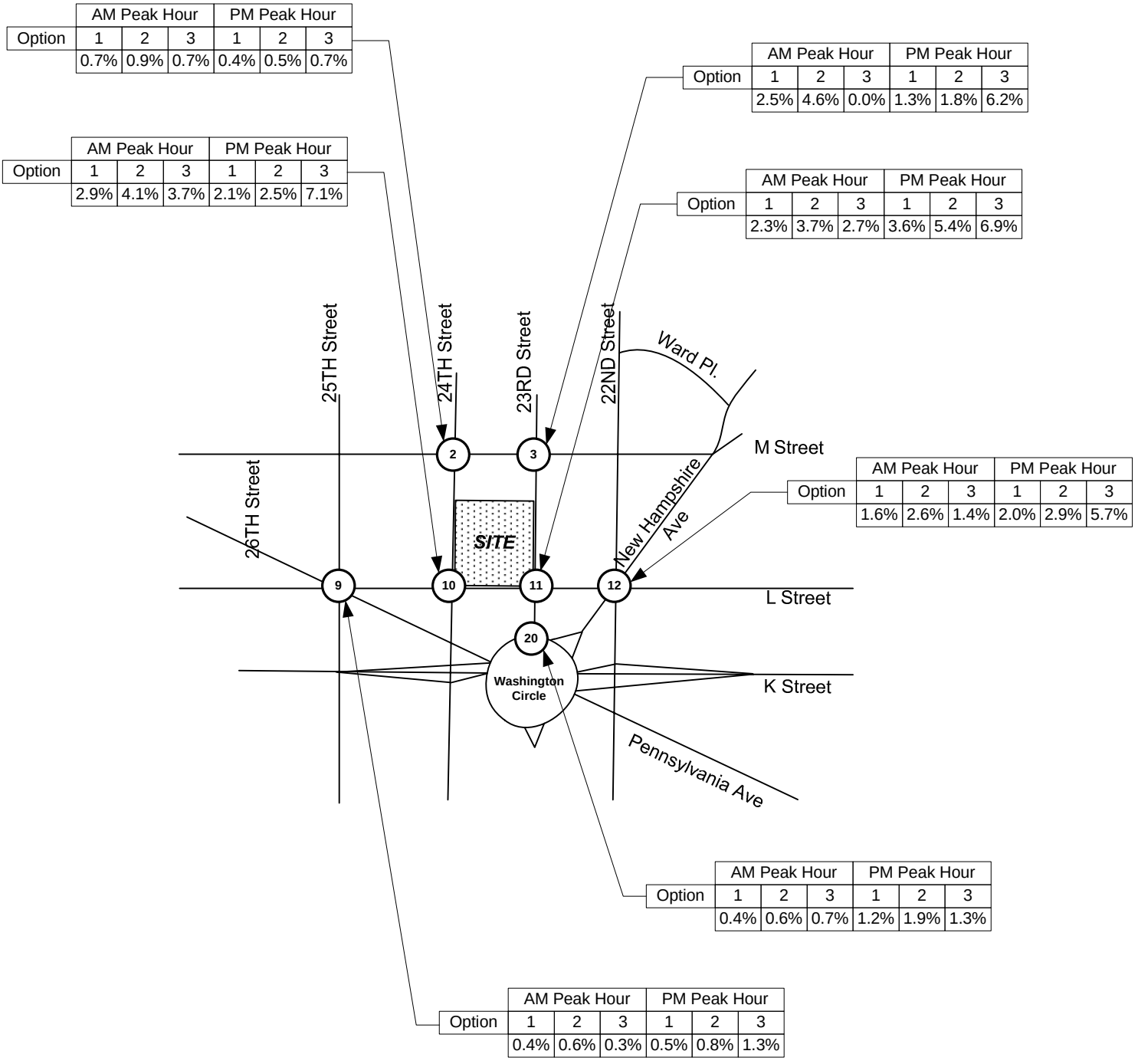
Option	AM Peak Hour			PM Peak Hour		
	1	2	3	1	2	3
	0.4%	0.6%	0.7%	1.2%	1.9%	1.3%

Option	AM Peak Hour			PM Peak Hour		
	1	2	3	1	2	3
	0.4%	0.6%	0.3%	0.5%	0.8%	1.3%

Note:

The site impacts were calculated by dividing the additional site generated traffic by the total forecast traffic at each intersection.

Not to Scale		Square 37 Rezoning	Site Impact for Intersections in the Immediate Vicinity of Rezoning Site	FIGURE 27
September, 2002	N			



Note:

The site impacts were calculated by dividing the additional site generated traffic by the total forecast traffic at each intersection.

Not to Scale September, 2002	N	**Square 37 Rezoning**	**Site Impact for Intersections in the Immediate Vicinity of Rezoning Site (2-way NH Ave.)**	**FIGURE 28**

Table 7

AM Peak Hour Levels of Service for Site Development Options

		AM Peak Hour	AM Peak Hour with Improvements				
No	**Intersection**	**Existing Traffic No Improvements LOS**	**Existing LOS**	**2007 Other Area Traffic LOS**	**2007 Option 1 LOS**	**2007 Option 2 LOS**	**2007 Option 3 LOS**
1	25th Street and M Street	A	A	A	A	A	A
2	24th Street and M Street	A	B	A	A	B	B
3	23rd Street and M Street	A	A	A	A	C	A
4	M Street and New Hampshire Avenue	A	B	A	B	B	C
5	21st Street and New Hampshire Avenue	C	B	B	C	C	C
6	21st Street and M Street	B	B	B	B	C	D
7	20th Street and M Street	B	B	B	B	D	D
8	26th Street and L Street	B	B	B	B	B	B
9	25th Street / L Street / Pennsylvania Avenue	**F**	**F**	**F**	**F**	**F**	**F**
10	24th Street and L Street	B	D	B	B	E	B
11	23rd Street and L Street	B	A	B	B	E	B
12	L Street and New Hampshire Avenue	**F**	**F**	D	**F**	**F**	**F**
13	21st Street and L Street	B	B	B	E	B	B
14	20th Street and L Street	B	B	B	B	B	B
15	25th Street and K Street	E	**F**	**F**	**F**	**F**	**F**
16	24th Street and Pennsylvania Avenue	**F**	**F**	**F**	**F**	**F**	**F**
17	K Street Service Road and Washington Circle (NW)	C	**C**	C	C	C	C
18a	24th Street and K Street (N)	B	C	B	B	D	B
18b	24th Street and K Street (S)	E	**F**	**F**	**F**	**F**	**F**
19	K Street Service Road and Washington Circle (SW)	A	A	A	A	B	B
20	23rd Street and Washington Circle (N)	B	B	C	B	D	B
21	New Hampshire Avenue and Washington Circle (NE)	A	A	C	A	C	A
22	K Street Service Road and Washington Circle (NE)	A	A	A	A	A	A
23a	22nd Street and K Street (N)	C	C	B	C	D	B
23b	22nd Street and K Street (S)	B	B	B	B	B	B
24	21st Street and K Street	C	C	D	E	C	D
25	20th Street and K Street	B	B	B	B	B	B
26	Pennslyvania Avenue and Washington Circle (SE)	B	A	B	B	C	B
27	22nd Street and Pennsylvania Avenue	**F**	**F**	**F**	**F**	**F**	**F**
28	23rd Street and Washington Circle (S)	A	A	A	A	B	A
29	New Hampshire Avenue and Washington Circle (SW)	B	B	C	C	C	C
30	24th Street and New Hampshire Avenue	**F**	**F**	**F**	**F**	**F**	**F**
31	23rd Street and I Street	B	C	**F**	C	C	C
32	22nd Street and I Street	D	E	A	A	C	A
33	23rd Street and H Street	A	C	C	B	D	D

Note: The level of service for some of the intersections deteriorates under the scenario with improvements. This is due to the effect of additional traffic reaching internal intersections as a result of improved capacity at intersections that are currently metering the traffic at entry locations to the study area. While some of the intersections are expected to degrade due to the implementation of the proposed improvements, many intersections are expected to operate at much better LOS than today. Furthermore, the traffic model indicates that the overall delay for the study area network will be lower with the implementation of the proposed improvements during the AM and PM peak hours.

Table 8

PM Peak Hour Levels of Service for Site Development Options

		PM Peak Hour	PM Peak Hour with Improvements				
No	**Intersection**	**Existing Traffic No Improvements LOS**	**Existing LOS**	**2007 Other Area Traffic LOS**	**2007 Option 1 LOS**	**2007 Option 2 LOS**	**2007 Option 3 LOS**
1	25th Street and M Street	A	A	**F**	B	E	A
2	24th Street and M Street	**F**	E	**F**	E	**F**	C
3	23rd Street and M Street	**F**	**F**	**F**	**F**	**F**	**F**
4	M Street and New Hampshire Avenue	**F**	**F**	**F**	**F**	**F**	**F**
5	21st Street and New Hampshire Avenue	**F**	**F**	**F**	**F**	**F**	**F**
6	21st Street and M Street	**F**	**F**	**F**	**F**	**F**	**F**
7	20th Street and M Street	**F**	**F**	**F**	**F**	**F**	**F**
8	26th Street and L Street	A	A	A	A	A	A
9	25th Street / L Street / Pennsylvania Avenue	**F**	**F**	**F**	**F**	**F**	**F**
10	24th Street and L Street	**F**	**F**	**F**	**F**	**F**	**F**
11	23rd Street and L Street	**F**	**F**	**F**	**F**	**F**	**F**
12	L Street and New Hampshire Avenue	**F**	**F**	E	E	E	E
13	21st Street and L Street	B	B	E	C	B	D
14	20th Street and L Street	B	B	E	B	B	D
15	25th Street and K Street	B	C	D	C	C	C
16	24th Street and Pennsylvania Avenue	**F**	**F**	**F**	**F**	**F**	**F**
17	K Street Service Road and Washington Circle (NW)	C	C	C	C	C	C
18a	24th Street and K Street (N)	B	D	C	C	C	C
18b	24th Street and K Street (S)	C	D	E	D	E	D
19	K Street Service Road and Washington Circle (SW)	A	A	A	A	A	A
20	23rd Street and Washington Circle (N)	D	D	E	E	**F**	E
21	New Hampshire Avenue and Washington Circle (NE)	C	C	D	D	D	E
22	K Street Service Road and Washington Circle (NE)	A	A	A	A	A	A
23a	22nd Street and K Street (N)	B	B	B	C	C	C
23b	22nd Street and K Street (S)	A	A	A	A	A	A
24	21st Street and K Street	C	C	C	C	C	C
25	20th Street and K Street	B	B	D	B	B	D
26	Pennslyvania Avenue and Washington Circle (SE)	B	B	C	C	C	C
27	22nd Street and Pennsylvania Avenue	**F**	**F**	**F**	**F**	**F**	**F**
28	23rd Street and Washington Circle (S)	A	A	A	A	A	A
29	New Hampshire Avenue and Washington Circle (SW)	B	A	A	A	A	A
30	24th Street and New Hampshire Avenue	**F**	B	D	C	**F**	**F**
31	23rd Street and I Street	C	B	A	A	A	A
32	22nd Street and I Street	A	A	B	B	B	B
33	23rd Street and H Street	A	A	**F**	**F**	**F**	**F**

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